

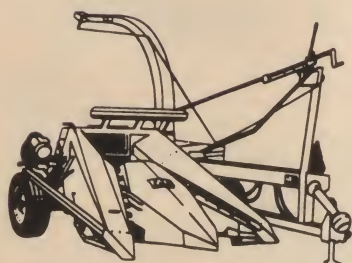
THE macdonald JOURNAL

JULY 1978



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THE macdonald JOURNAL

JULY 1978

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Editor: Martin van Lierop,
Agronome
Managing Editor: Hazel M. Clarke
Contributing Editors:
Jim Feeny
Macdonald Reports
J. B. Roy, Agronome,
Information Division,
Ministry of Agriculture of Quebec
Business Manager:
Martin van Lierop

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In This Issue

Cover: A delightful drawing of a
majestic beast, Ararat Craftsman
Goliath. For a photo of Ararat and
an informative article on goats,
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Plus Macdonald College Extension
Courses 1978-79

Journal Jottings

Two or three years ago a group of
us were chatting informally during
the WI Convention about Journal ar-
ticles and one member asked,
"When are you going to publish an
article on goats?" At the time I must
confess that I wondered just how
keen our readers would be in this
subject, but no longer. I am convinc-
ed that there is a growing interest in
this once rather maligned animal. A
visit to a goat farm, the subtle taste
of the cheese produced there, and
two evening courses later (I didn't
attend but heard good reports), the
answer to the question "when" is
"now"! In this issue, and I hope you
and our other readers enjoy reading
it. The article by Pierre and Martine
Gadbois, who operate a goat farm in

St. Lazare de Vaudreuil, is as enthu-
siastic and positive as are their ef-
forts to create what they consider a
rightful "Place for Goats in Quebec
Agriculture." Again this year, Mar-
tine will be teaching evening
courses in Goat Husbandry — two
are being offered in the fall, one in
English, the other in French, and
next spring the course will be
repeated in English. Outlines of this
course and close to 85 others that are
coordinated by the Extension
Department of Macdonald College
can be found in this issue. It is an
excellent combination of courses
that have been given in the past
together with those that are being
offered for the first time.

From combines to courses to con-
vention and lots more inbetween,

the July issue, as usual, has been
an interesting one to assemble. It
has also been the first one that we
have worked on from our new
quarters in the Macdonald-Stewart
Building. Once everyone has settled
in I hope that we will be able to give
you a pictorially guided tour of the
new building through our pages.

Hazel M. Clarke

Guest Editorial

This is the time of year during which most of our members become very observant "young farmers". They make at least two trips a day to the garden to see if the carrots are up or to the barn to see how the calves are looking.

Then comes the weeks of work training a calf or pulling weeds. I'll never forget the first time that I had a 4-H garden. I had the best weeds in Brome County that year. The carrots were so thick that none of them grew any larger than my little finger and my corn made a great feast for the blackbirds. I guess that my garden looked pretty pathetic when the judges came by for the inspection. "Don't worry," my mother said. "Your cucumbers aren't bad." So I made sure that there wasn't a weed in site in the corner of the garden where the cucumbers were situated.

Then came the job of picking out all of the best vegetables to take to the fair. Once they were all scrubbed up, they looked half-way presentable; that is until I got them to the fair and started comparing them to everyone's produce. How was I ever going to win anything! My cucumbers placed second and, much to my surprise, my tomatoes (I guess that everyone had a bad year for tomatoes) placed forth. I went home very excited about the prizes that I had won, and it never even occurred to me that there were a number of prizes that I hadn't won.

Every year there are a number of young people who go home looking very sad because they did not place first nor did they receive a shining trophy. Many parents strongly emphasize this idea of winning. When their child comes first they are proud, and the child is pleased that he has pleased his parents. If he does his best and still does not win, he feels guilty. He feels that he has let his parents down. That is the main reason that long faces appear during times of competition.

Difficult as it may seem, our young competitors and their parents should remember that the idea of coming first and getting a trophy is just a fringe benefit, to encourage excellence. If you work hard and achieve your best, then you should feel proud of these accomplishments. Another year you can improve even more. If you do poorly and you know that it is because you did not work hard enough or put your best into it, then you shouldn't feel downhearted. You should tell yourself that you just need to work a little bit harder and you will probably do better next time.

There is nothing that causes more trouble in a club than too much competition. The concept of winning overrides everything else. The club members forget that their main objective is to learn something and to have a little bit of fun in the process. I am sure that we have all seen competitions and clubs marred by over-competition. Many problems could be alleviated if the idea of "doing one's best" rather than winning a red ribbon was promoted.

Too bad we couldn't all be like the little boy who came running home all excited and waving his blue ribbon. "I came second and Johnny came first," he told his mother while trying to find an appropriate place to hang up his ribbon. "That's wonderful," she said. "How many were you in the class?" "Just the two of us," came the happy reply.

Joanne Enright
Secretary-Manager
Quebec Young Farmers'

PUTTING MORE CORN IN THE BIN

by Professor E. R. Norris
Department of Agricultural
Engineering

Now that the corn is stretching upward in the summer sun, it is not too early to start thinking about maximizing returns at harvest time. The use of the combine for harvesting corn is a relatively new development in eastern Canadian agriculture and presents some new and different problems for the farmer in maintenance, adjustment, and operation. The conventional combine was not designed originally for corn threshing but was adapted to the harvesting of corn as a result of demand for greater mechanization of the entire corn handling system. Whether some of the newer, non-conventional combines are better adapted to corn harvesting is yet to be seen.

Before the corn harvesting season is upon us, it would be wise to check certain things about the combine and make appropriate repairs. The corn header sometimes operates under rather difficult conditions and is therefore subject to greater damage and wear problems. It would be a good idea at this time to check the corn header for bent gathering points, worn gathering chains, and worn or maladjusted snapping rolls and stripper plates. The gathering points should be adjusted so that they are close to the same level with the centre points approximately one inch higher than the outside points. Moving back through the machine, the cylinder and concave assembly should be checked for wear and damage. Bent bars should be straightened and badly worn or bent bars should be replaced. All parts of the straw walker and sieves should be check-

ed for loose bolts and bent parts and suitable replacements and adjustments made in these areas. Bearings on the straw walkers, sieves, and grain elevators should be checked and replaced if necessary.

Machine Adjustments

Before starting corn harvest, various parts of the machine should be adjusted to manufacturer's specifications for the harvesting of corn. The threshing and separation of corn is quite different from that of small cereal grains and these adjustments are quite critical. Cylinder speed should be adjusted to a relatively low value; depending on the make and model of the machine, the cylinder speed may be set anywhere from 400 to 900 rpm. Cylinder concave clearance for corn harvesting is relatively large, usually in the range of 1-1 1/2 inches. The chaffer and shoe sieves are usually set at a spacing of five-eighths and one-half inches respectively. The fan speed should be set to manufacturer's specifications and further adjustments made after the beginning of field operations.

Field Operation

Once the preliminary settings of the various parts of the machine have been made, the combine should be operated in the field and further adjustments made, depending upon crop condition, moisture content, and crop yield. Because of the nature of the crop, precise field operation is more critical in corn than in many other crops. The operator must be very careful to operate the machine so that the gathering points are centred on the

rows and proper forward speed is most important. The forward speed of the machine must be adjusted to be compatible with the speed of the snapping rolls in the corn head. The machine should be moving ahead at such a speed that the ears are snapped from the stalk at a point approximately two-thirds of the way up the snapping rolls. If the machine is travelling too fast, crowding of the stalks will occur with a resulting increase in losses; if the machine is operated too slowly, snapping will occur too far forward in the snapping rolls and some cobs will be lost from the front of the header. The header should be operated at a height such that the gathering chains engage the corn stalks at a point just below the lowest point on the lowest ears. This setting will vary depending upon the variety of the corn, the growing season, and the stage of maturity of the crop. If the corn stalks are lodged, the gathering points should be maintained at a position where they simply float lightly along the ground surface gathering in the lodged stalks and presenting the ears to the snapping rolls. The stripper plates should be adjusted just close enough so that the corn stalk can be pulled down through them unimpeded.

Checking Losses

After operating the machine for a few rounds in the field using the preliminary settings suggested by the operator's manual, it is wise to check the harvested area to determine the amount of crop losses. It is impractical to expect that the machine will recover 100 per cent of the crop, but fine tuning of the machine operation at the time can decrease losses considerably. If, in

a 100-bushel/acre crop, the losses can be decreased from five bushels/acre to three bushels/acre, a significant increase in profit can be realized. By using the simple techniques outlined in the following discussion, this kind of increased crop recovery is quite possible.

First, let us consider the types of crop losses which might occur. The first loss which the farmer must consider is pre-harvest loss. This is the loss which occurs before he ever enters the field and is in the form of cobs of corn which have fallen from the plant before harvest time. The second kind of loss which occurs is header loss; this loss takes the form of whole cobs, broken pieces of cob and loose kernels which escape the corn header during the harvest operation. The third kind of loss is cylinder loss; this type of loss takes the form of cobs and cob pieces which pass through the cylinder without having the corn kernels completely threshed from them. The fourth kind of loss is separator loss; this takes the form of threshed kernels which pass out of the back of the machine from the straw rack, chaffer sieve, or shoe sieve rather than being separated and delivered to the grain tank.

There are simple methods by which all of these losses can be estimated quickly in the field. First let us look at pre-harvest losses. Pre-harvest losses can be estimated by gleaning the cobs on the ground in the standing crop in an area equal to 1/100 of an acre. In order for this to be a realistic estimate, the cobs should be picked up in an area equal to one swath width of the machine. The number of three-foot paces for different row spacings and different machine widths are given in the following table:

Table 1. Number of Paces along Swath for 1/100th Acre
Row Spacing (inches)

Header Size	20	28	30	36	38	40
One Row	87	62-1/4	58	48-1/2	45-3/4	43-1/2
Two Row	43-1/2	31	29	24-1/4	23	21-3/4
Three Row	29	20-3/4	19-1/4	16-1/4	15-1/4	14-1/2
Four Row	21-3/4	15-1/2	14-1/2	12	11-1/2	11
Six Row	14-1/2	10-1/4	9-3/4	—	—	—
Eight Row	11	—	—	—	—	—

The number of three-quarter-pound ears found in this area is equal to the pre-harvest loss in bushels per acre. For example, if three cobs are found in the standing corn in the 1/100-acre sample, the pre-harvest loss is equal to three bushels per acre.

Header loss can consist of whole cobs, broken cobs, and kernels shelled by the corn header. To determine the whole cob and broken cob portion of the header loss, glean the whole cobs and broken cobs in a 1/100-acre plot of the same dimensions as for the pre-harvest loss but in the harvested area. The same rule of thumb applies; to continue the previous example, if the equivalent of five whole and broken cobs are found in a 1/100-acre plot

after the machine has passed through, the header can be charged with two bushels per acre of crop loss. However, if the crop is fairly dry, some kernels can be shattered from the cobs by the corn header. In order to get an estimate of this loss, the machine must be stopped during operation and backed up a distance equal to its own length. The rule of thumb which applies here is that if 20 kernels of shelled corn are found in a 10 square foot area, a loss of one bushel to the acre has occurred. In order to facilitate this kind of estimation, it is a good idea to construct a rectangular sampling frame with one dimension equal to the row spacing and long enough to encompass 10 square feet. Frame dimensions are given in the following table:

Table 2

Row Spacing (inches)	Frame Dimensions
20	20in x 72in
28	28in x 51-3/8in
30	30in x 48in
36	36in x 40in
38	38in x 37-7/8in
40	40in x 36in



Precise adjustment and operation of this expensive machine will increase profits.

This sampling should be repeated across the width of the machine a number of times equal to the number of rows harvested by the machine. If, for example, an average of 10 kernels per 10 square foot frame is found, then the header can be charged with an extra one-half bushel per acre loss.

Sampling for cylinder and separating section losses is done using the same sampling frame as was used in the above paragraph. In this case, all loose kernels and kernels on partially threshed cobs and cob pieces are gleaned in 10 square foot sam-

ple areas across the width of the machine after the machine has passed through the crop. Suppose, for example, that an average of 20 loose kernels and 20 unthreshed kernels were found in the 10 square foot areas behind the machine; this would indicate that the cylinder loss is one bushel per acre and that the loose kernel loss from the header and sieves is one bushel per acre. Since the loose kernel loss from the header has been determined to be one-half bushel per acre, then the chaffer and shoe sieves can be charged with the other half bushel per acre loss.

Adjustment for Acceptable Loss Levels

In general, it is considered that an acceptable job of combining is being done when total losses range between three and five per cent of the crop yield. It is impractical to attempt to totally eliminate crop losses. Furthermore, the adjustments of the combine must be made in the form of a compromise to balance losses throughout the process. For example, cylinder losses can be reduced to zero by increasing the aggressiveness of the cylinder concave action, either by increasing cylinder speed or decreasing cylinder concave clearance. However, the resultant increased breakup of cob material is likely to result in clogging of the sieves with broken cob pieces, thus increasing separating section losses. As a result, the total losses from the machine increase as a result of the attempt to eliminate cylinder loss. A further result of this drastic kind of adjustment would be the cracking and breakup of corn kernels and these would be lost in the form of fines blown out of the rear of the machine.

In general, if the various parts of the machine can be adjusted so that the header loss, cylinder loss, and separating section losses are each one per cent or less of the crop yield, an excellent job of combining is being done. Any further adjustments are likely to cause problems in other parts of the machine.

Although the procedures outlined seem complicated at first reading, it is possible to check loss levels and make adjustments in approximately a half hour of work. If this procedure decreases harvesting losses by even one bushel per acre, it doesn't take very long to repay the time spent.

A Place for Goats in Quebec Agriculture

by Pierre and Martine Gadbois

Goat husbandry now tends to stand at its right place in Quebec agriculture. It has taken years to be able to make this kind of statement, and it has only really become fact in the past few, with many good quality herds being created and with the rapid development of suitable markets.

In the past, many farms had a goat. The milk was used to feed newborn babies in the family; as well, the goat was used as a sickness detector for the cows in the barn. The goat was supposed to get sick before the other animals, and therefore the farmer could protect the health of his herd. The goat also had the reputation of offering a type of milk that would cure all the sicknesses that existed. Of course, all this was accomplished with a feeding program that included cans, pieces of twine, and dry leaves in the fall. Good management and a good reputation for an animal with such a high production potential? Fortunately, times have changed and scientific and organized production of goats is now taking place in Quebec.

Breeds: On this subject we are largely influenced by the breeding that takes place in the United States. Consequently, we find in Quebec a high concentration of the Toggenburg breed, which is recognized as being particularly good for long lactations during the winter time. In lesser amounts, we also find French Alpine, Nubians, and Saanens. The annual production of these different breeds in our climate and depending on their origins ranges between 500 kg and 1000 kg. In general in Canada, improvement of herds with purebred bucks is only possible by the impor-

tation of proven bucks from the United States. This situation will prevail for a few more years until our own herds are firmly established and improved following the implementation of the milk control program two years ago. This program was highly recommended by Dr. John Moxley of Macdonald College.

Milk: Goat's milk, although it runs about the same butterfat content as cow's milk — 3.2 to 3.8 per cent — appears to be richer and smoother. This is because fat globules are smaller and stay in suspension longer. The cream, when it does rise, is hardly noticeable because it has a bland colour. Goat cheese and butter are almost white.

Goats are efficient producers in relation to their size. They are bred at about 80 pounds (approximately nine months old) and after the five months' gestation period begin producing for a 10-month period. Kids usually arrive in pairs or triplets. It must be noted that goats are seasonal breeders like deer, although, like the cow, it is possible to induce heat artificially.

Management: In comparison to other countries we must bear in mind that we have to face an extremely rigorous winter. Goats do adapt wonderfully to cold climates but we must remember that they do not produce a large amount of heat as do cows in a barn. Insulation and ventilation of buildings is extremely important in goat breeding. In general, goats are fed legume hays (alfalfa

and red clover) or mixed with grass hays. Concentrates are used to complement the goats' rations. These are usually mixtures containing 14 to 16 per cent crude protein. Many herds are also fed dried beet pulp and dehydrated alfalfa. In general, roots are not used a great deal in goat feeding during winter months. In the summer, excellent pastures (wild or cultivated) offer a wide feeding variety in all regions of Quebec (average intake of food species is 400 more than cows).

Buildings: We use almost the same systems as are used in Europe and the United States, although there seems to be a preference here for the use of key holes instead of mobile blocking devices. Naturally, most of the animals are dehorned at a few days of age. Systems vary from small pens to large free-ranging areas to tie stalls similar to those used for cows. Milking parlours are mostly equipped with milking stands or piers with a blocking device, and concentrates are often fed at this time. Milking machines, either special ones for goats or adapted cows' machines, are used in most cases, and a few herds are equipped with pipelines. The use of bulk tanks is increasing.

Production: There are three types of production in Quebec. First, there is the production of industrial milk to be processed into cheese. The average herd for this type of production includes about 40 milkers. This cheese, containing goats' and cows' milk is marketed as a slightly aged product and is distributed in all major outlets.

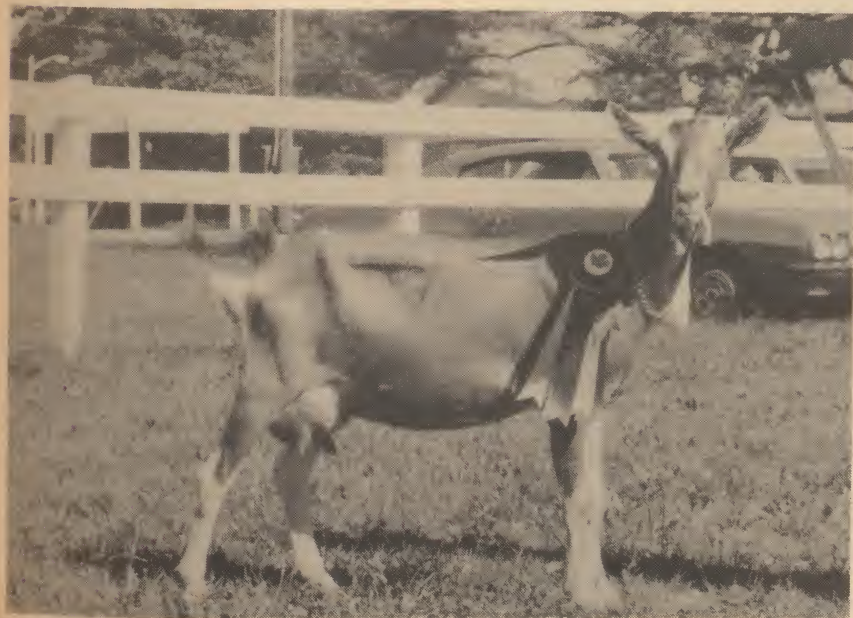


In this type of production, the farmer delivers his milk to the plant. At present, the price for milk is \$23.25 per hundredweight with a butterfat content of 3.6 per cent. This market seems to have reached its stabilizing level because of the small number of processing plants. However, with the actual tendency of promoting the processing of specialty cheeses made in Quebec, we can foresee an increase in this market in the near future.

The second type of production deals with the processing of farmer's cheeses sold directly at the farm or in the local perimeter. The average herd includes about 20 milkers. This type of cheese is sold quite fresh because of market demand. This type of processing is recognized by the Quebec Department of Agriculture, which offers certain means of control for the bacterial quality of the product. These cheeses are much appreciated by the gourmet public, and they offer



Opposite page: a two-year-old Toggenburg buck. Above: a purebred Nubian doe; below: A Canadian Toggenburg doe.



the same refinement that we find in countries with a longer established cheese tradition. Of course, because it is a new product, there are still certain problems in processing, in obtaining adequate equipment, and in creating a more flexible attitude by the people responsible for the control of the processing of this product at the government level, even though the sanitary and bacterial quality of the product is proven. For example, certain rules and by-laws concerning large cow's milk processing plants cannot be applied to goats' products with which they are compared.

Third, many farmers have goat herds only for meat production. In this case, the average herd includes approximately 100 head. The demand is quite high, especially around big cities where there is a high percentage of ethnic populations. We must also note that a small number of people are testing the Angora goat breeding as it is done in the southern part of the United States. These two latter types do not consider milking; the



Two views of the milking parlour on the Gadbois farm. The does shown here as well as the animals on the preceding pages are part of the approximately 40 head on the Gadbois's St. Lazare de Vaudreuil farm.

kids are left with their mothers. The selection aims mostly at growth rate, weight, and multiple births.

The markets and the increase of herds have obviously created the necessity of a Quebec Goat Breeders Association. This organization has the following objectives: promotion, organization, technical data, and improvement of production in general. The Association has 300 members found mostly in the southeastern part of the province. It publishes a technical magazine (*Chèvre-Québec*) for its members or anyone else interested in the subject. The Association deals mostly with the creation of courses for goat farmers, organization of seminars, promotion of research, exhibitions, auctions and the publicity related to

the products. This fall, in cooperation with the Office Franco-Québécois pour la jeunesse, 20 breeders will participate in a study tour on goat husbandry in France. This will be the occasion to improve our knowledge and thus be able to redistribute it in our own environment upon return.

The main difficulty that we have to face at the moment is a technical handicap. Goat farmers must face situations where they lose time and money because of a lack of know-how. North American systems of milk production are strictly adapted to our big dairy cows, but we are convinced that, after having eliminated the myth of the can-eating goat, our animals will bypass, in all proportions, the production

records of Holsteins because of the good faith and care of our breeders.

Goat farming in Quebec, still very young, will improve very quickly and, with proper measures and management and selective gathering of technical data, we can foresee a very bright future during the next 10 years.

(As a result of the enthusiasm shown for her course last year, Martine Gadbois is offering two courses in Goat Husbandry this fall — one in English, the other in French. This course, which will be offered again in the spring, is part of this year's Evening Course program organized through the Extension Department of Macdonald College.)

Macdonald Reports

by Jim Feeny

AGRICULTURE BUILDING RENAMED

Many Departments have moved or are in the process of moving into the new Macdonald-Stewart Building, and we will discuss this move in a future issue. Meanwhile, renovations of two other College buildings — Agriculture and Barton — are underway. The changes now taking place in the Agriculture Building are not limited to physical renovations. The building has been renamed the "Raymond Building" in commemoration of the late Professor Lee Carleton Raymond.

Professor Raymond was a native of Bloomfield, New Brunswick, and received his degree from Macdonald in 1912 — the second year that Mac turned out graduates. After graduation, Professor Raymond worked for one year as a Farm Demonstrator here at the College and joined the Department of Cereal Husbandry as an Assistant immediately after. The rest of his professional career was spent at Macdonald, with the exception of service overseas in the First World War.

Professor Raymond received a Master's degree in Genetics from the University of Wisconsin and taught a course in formal Mendelian Genetics from the time of his return from Wisconsin until 1950. During that time, he moved upwards through the academic "ranks" at Macdonald until he was named a full Professor of Agronomy in 1947. He had also been named Chairman of the Department of Agronomy in 1946, a post he held until his retirement in 1954.

Professor Raymond's activities were not confined to the fields and laboratories of the College. He was Chairman of the Quebec Pasture Committee and served on several advisory committees to the Quebec Department of Agriculture. He was associated with the Canadian Seed Growers' Association, the Agricultural Institute of Canada, and the Canadian Society of Agronomy. He was a charter member of the two latter organizations. In addition, he was elected a Fellow of the Agricultural Institute of Canada, and

made a Life Member of the Canadian Seed Growers' Association during the course of his long and distinguished career.

The Agriculture Building has a long and honourable tradition behind it; it's fitting that the person commemorated by its new name had been a staff member who contributed to that tradition.

(Much of the material in this story has been adapted from the original proposal to the Faculty.)



NEW FOOD SCIENCE DIRECTOR APPOINTED

Dr. Shirley M. Weber has been appointed Director of the School of Food Science, effective June 1, 1978. Dr. Weber joined the Macdonald staff last September, having previously been the Head of the Department of Foods and Nutrition at the University of Manitoba.

Dr. Weber has worked extensively in community nutrition, an interest she plans to maintain at Macdonald. She hopes to be working with such groups as the Local Community Service Centres (LCSC.) towards this end. She also has served as a nutrition consultant to various health agencies and governments. She was a member of the Prairie Provinces Royal Commission on Consumer Problems and Inflation, and served as a Food Services Officer in the Canadian Armed Forces (Reserve).

Dr. Weber commented that she fully supports the College's traditional commitment to community service in Quebec. She would like to see the establishment of nutrition seminars and courses in rural areas of the province, to be given by Macdonald staff members. She invites any rural group that might be interested in such an activity to contact her at the College.

MACDONALD PLANT BREEDER HONOURED

Professor Harold R. Klinck was recently presented with an honorary Life Membership in the Quebec Seed Growers' Association (L'Association des Producteurs de Semences du Québec). This is the first time that such an honour has been awarded by that association.

Professor Klinck is Professor of Agronomy in the Department of Plant Science here at Macdonald. His award is in recognition of his contribution to the science of plant breeding over the years.

Professor Klinck's contribution has been important. His accomplishments include the release of the Glen, Dorval, Yamaska, and Laurent varieties of oats, and of the Champlain, Laurier, and Loyola barley cultivars. These have all been widely used by eastern Canadian farmers: about one-quarter of the barley at present grown in this province is of the Loyola variety.

Professor Klinck is heavily involved with the Conseil de Production Végétales du Québec, which co-ordinates all plant breeding efforts in Quebec. He has also been the president of the Canadian Seed Growers' Association.

ANIMAL CARE COURSE TO BE GIVEN

How do you clip a baby pig's needle teeth? How many sheaves of hay constitute 15 pounds? How do you cheaply convert a barn that formerly housed dairy cattle into one that can be used to house a few head of beef cattle?

Answering these and similar questions is the objective of the "How to Improve and Care For Livestock" course. It's part of the Macdonald College Extension Evening Course Program, which is outlined elsewhere in this issue of the Journal. This course is co-ordinated by Jim Houston, Assistant Director of the College Farm; he and other farm personnel give the various sections of the course.

Jim says that the course is aimed at the person who, after having lived most of his or her life in the city, has acquired some land and buildings in a rural area. This person may be living on the property full-time, or just on weekends, but has been on it long enough to become familiar with it and its capabilities. Not content with having the facilities idle any longer, or renting them out to a neighbour, the owner has decided to acquire a few head of livestock. These will be used for the owner's personal satisfaction, to help out with the family food budget, and perhaps to provide a small surplus to sell to friends. So the course is not for the aspiring professional farmer; it is for the part-time, or hobby agriculturalist. Jim Houston says that the course does not aspire to make professionals out of the people who take it; he says that it does attempt to help people who are just getting started in small-scale livestock production make good decisions.

There are two important factors mentioned in the course title: "improving" and "caring for." Most of the course content focuses on these concerns and those of the students.

Animals dealt with in the course include beef cattle, sheep, chickens, and pigs. Jim explains that most people in the situation outlined

above stock their farms with one or more of these classes of livestock. They don't often work with dairy cattle to any great degree, due to the heavy demands these animals impose upon the owners' time and labour. The other animals mentioned are relatively easy to care for, thriving under much less care and toil than milk cows. This is what makes them attractive to the part-time farmer who earns his living from off-farm sources.

Jim Houston teaches the sections dealing with beef cattle and sheep production. He says that his objective is to give the beginning herdsman enough information to get him started on the proper foot. This means that a wide variety of topics are covered. Everything from animal grooming (especially important for sheep!) to animal health to animal feeding to animal housing is discussed in detail.

The idea here is that the more the novice knows about his or her stock at the outset, the less likely he is to be surprised by his new charges. And any experienced farmer will tell you that some of the surprises that animals are capable of can be annoying, if not downright unpleasant!

The sections on swine and poultry are taught along the same lines. Ted Sutherland, the College swine herdsman discusses basic facts and tips pertaining to pig production — again for the beginner who is in the business mostly for his own use and enjoyment. Poultry workers of the Animal Science Department discuss the skills involved in working towards a freezer full of broilers or fresh eggs on the table every morning.

Jim Houston stresses that this is a see and do type of course. Much of

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MACDONALD COLLEGE EXTENSION COURSES

1978-79

GENERAL INFORMATION

MACDONALD COLLEGE:

Macdonald College is located at Ste. Anne de Bellevue, on the western tip of the Island of Montreal, about 20 miles from downtown Montreal.

Entrance to the campus may be made from the Lakeshore Road, and by the Trans Canada Highway Exit 26 westbound via Ste. Marie Road and the overpass which leads to the farm, and eastbound Exit 26 and the service road. Also from Highway 2 & 20 at the Ste. Anne de Bellevue underpass.

REGISTRATION:

Registration by mail or in person is **now open**. The earlier you register the better the opportunity for you to attend the course of your choice, particularly if the class is limited. We will accept post-dated cheques, dated the first of the month the particular course opens.

To register by mail, completed application form (see page 15S), together with cheque or money order made payable to Macdonald College, should be sent to Evening Courses, Extension Department, P.O. Box 237, Macdonald College, P.Q. H0A 1C0. For further information telephone: (514) 457-2000, local 227 or 284.

Day Registration: Extension Department, Room 2-84, Macdonald-Stewart Building, 9:00 a.m. to 12 noon and 1:30 to 4:30 p.m. Monday to Friday inclusive. We strongly advise early registration as a minimum of 10 students is required in order to present a course.

SENIOR CITIZENS

Courses will be opened to senior citizens (65 yrs.) registering at 10 per cent of course fee. Applications will be accepted after the minimum registration required to open course has been attained. A limited number of students in each course will be welcomed. As registration in person only is requested, may we suggest you telephone us first for information on a particular course in which you are interested.

REFUNDS:

To obtain a refund, the student card of admission, as well as any material handed out in class, must reach the Extension Department before the second lecture in the course is given; this can be done by mail or in person. A refund, less \$5 per course, will be mailed to the student within six weeks. No refund will be made to a student who registers or cancels after the second lecture in a course.

Allowances cannot be made for a change of personal plans including transfers or additional commitments which a student may accept after arranging his/her course schedule.

FEE:

The fee, as indicated for each course, is payable in advance at time of registration.

RECEIPTS:

For those who require receipts for income tax, forms in duplicate will be available at the last lecture of the course.

MACDONALD JOURNAL:

Each person registering for an evening course will receive a one-year subscription to the Macdonald Journal, a monthly publication reflecting the endeavours of Macdonald College and serving the needs and interests of farmers and the rural community. If you are already receiving the Journal, may we suggest you pass your new copy on to a friend.

CHANGE OF ADDRESS:

Students should inform the Extension Department of any change of address after registration. The course in which the student is registered should be indicated.

CLASSROOMS:

Location and room numbers for all courses will be posted on the Extension Department Directory Board located in the foyer of the front entrance to the Macdonald-Stewart Building. The building and room number may also be obtained by telephoning the Extension Department, 457-2000, local 227 or 284.

CANCELLATION OF CLASSES:

If a class must be cancelled due to inclement weather, notice to that effect will be made on Radio Stations CJAD and CBC.

PARKING:

Ample parking space and no parking fee.

REGISTRATION IS NOW OPEN

COURSES

FALL TERM

GOAT HUSBANDRY

Martine Gadbois. 9 sessions of 2 hours, Mondays at 7:30 p.m., beginning September 18 through November 20, 1978. Farm Centre, Macdonald College. Fee \$70. Thanksgiving Monday, College holiday.

1. Introduction
2. Breeds — how to buy
3. Feeding
4. Housing
5. Care and management
6. Visit to a herd
7. Milking — equipment
8. Diseases
9. By-products (milk, cheese, meat, hides, etc.)

L'ÉLEVAGE CAPRIN

Martine Gadbois. 9 sessions de 2 heures, mercredi à 7:30 p.m., commençant le 20 septembre jusqu'au 15 novembre. Centre de la ferme, Macdonald College. Le coût \$70.

1. Introduction
2. Races — achats
3. Alimentation
4. Logement
5. Pratiques d'élevage
6. Visite d'un élevage
7. Traite — équipement
8. Maladies
9. Sous-produits (lait, fromage, viande, peaux, etc.)

HOW TO IMPROVE AND CARE FOR LIVESTOCK

Coordinated by Jim Houston, Asst. Director, Macdonald College Farm. 10 sessions of 2 hours, Thursdays at 7 p.m., beginning September 21 through November 23, 1978. Farm Centre, Macdonald College. Fee \$75.

A practical course, featuring sheep, swine, beef, dairy, and poultry, demonstrating how farm animals are evaluated and handled.

FARM MECHANIZATION AND STRUCTURES

Profs. E. R. Norris and P. J. Jutras, Department of Agricultural Engineering. 6 lectures of 2 hours, Tuesdays at 7 p.m., beginning September 19 through October 24, 1978. Agricultural Engineering Shop, Macdonald College Farm. Fee \$45.

Topics covered will be: Farm equipment requirements; maintenance of farm machinery; new construction and remodelling of farm buildings; and mechanization of feeding and waste disposal.

PRIVATE FORESTRY AND CONSERVATION

Coordinated by Profs. A. R. C. Jones and J. D. MacArthur, Department of Renewable Resources. 10 lectures of 2 hours, Thursdays at 7:30 p.m., beginning October 5 through December 7, 1978. Macdonald College. Fee \$75.

A practical course in conservation-oriented management for private forest owners with special attention to forest resources and values, management alternatives and multiple-use possibilities. It will include: tree identification, forest ecology, growth of trees and stands silvicultural practices, reforestation and plantation management, forest protection, principles of fish and game management, water conservation, Christmas tree culture, sugarbush management, aesthetic use of trees marketing information, service organizations, and legal matters of concern to small forest owners and managers. Field trips to interesting operations will be arranged.

FARM BUSINESS MANAGEMENT

Marcel J. Couture, Diploma in Agriculture Program. 10 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning September 20 through November 22, 1978. Macdonald College. Fee \$75.

This course is designed for the individual who is about to buy or has bought a farm. The course has been prepared with one major objective in mind, that is "how to make your farm more profitable".

The topics covered will be as follows: farm credit, farm records, taxation as it applies to the small and/or part-time farmer, budgeting, machinery, crop and livestock management, costs and other topics as agreed by the group, e.g., farm visits, farm partnerships and corporations, estate planning for the farmer, etc.

MANAGING THE SMALL POULTRY FLOCK

Prof. R. B. Buckland, Department of Animal Science. 6 lectures of 2 hours, Wednesdays at 7 p.m., beginning September 20 through October 25, 1978. Macdonald College. Fee \$45.

The course content will be directed toward individuals who wish to raise a few birds as a hobby and/or as a source of eggs and meat for the family. The course will include a discussion of sources of stock, housing feeding, incubation practices, and breeds. Depending on the interest of the participants, the above aspects of raising chickens, turkeys, ducks, geese, pheasants, quail, partridge, and pigeons will be discussed.

REGISTRATION IS NOW OPEN

ESTABLISHING AND OPERATING A SMALL APPLE ORCHARD

Richard Saul. Length of courses 5 weeks, 10 lectures of 2 hours, Mondays and Tuesdays at 7:30 p.m., beginning September 25 through October 30, 1978. Macdonald College. Fee \$75. Thanksgiving Monday, College holiday.

Designed for those who either are thinking of establishing an orchard on their farm or renovating an old one. Topics to be covered will include: Selection of an orchard site; selection of variety of apple, rootstock, where to obtain same, and approximate costs; when and how to graft, bud, and plant trees in the nursery and orchard; fertilizing and spraying programs; training and pruning methods, topworking of old trees; hormone sprays and harvesting techniques; storage and marketing of apples, includes "pick your own" method.

SUGAR MAPLE AND MAPLE SYRUP

Coordinated by Prof. J. D. MacArthur, Curator, Morgan Arboretum. 6 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning October 10 through November 14, 1978. Macdonald College. Fee \$45.

This course to present basic information on the sugar maple species and on production of maple syrup. It will include discussion of:

- Silvics and silviculture of sugar and black maples
- Development of productive sugar groves
- The phenomenon of sap flow and methods of sap collection and handling
- Processing maple sap to produce maple products
- Special problems and possible solutions
- Sources of information on the various aspects of the maple industry.

BUTCHERING

Richard Channon, Department of Animal Science. 5 sessions of 2 hours, Tuesdays at 7 p.m., beginning September 26 through October 24, 1978. Swine Centre, Macdonald College Farm. Fee \$40. Class limited to 15.

Cutting of Beef, Pork, and Lamb for home use.

HORSE MANAGEMENT 1A

Sam Dillingham. 10 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning September 26 through November 28, 1978. Macdonald College. Fee \$75.

This course will be of general interest to both horse lovers, owners, and potential owners. It will include discussion of: the history and development of the horse; the various breeds, training, development, nutrition, basic veterinary care, stable care, competition riding, and the economic potentials. Two practical stable sessions will be included.

PARASITES AND MAN

Coordinated by Dr. M. E. Rau, with Staff of the Institute of Parasitology, Macdonald College. 10 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning October 4 through December 6, 1978. Macdonald College. Fee \$75.

Parasites are a significant component in the health and ecology of Canadians. This course will present a broad-ranging discussion from a group of scientists actively involved in the problems of parasitology in Quebec and Canada. The lectures will emphasize the epidemiological and ecological aspects of parasitology in rural and urban environments. While clinical and diagnostic studies will be briefly included, they will not be stressed.

The parasitic diseases which result from international travel and immigration will be discussed together with those associated with pets, food, the farm environment and with recreations such as swimming, hunting, and fishing. The course will be directed at the non-specialist who is an interested member of the public but will also be useful to those in the health professions, wildlife, planners and biologists.

PLOWING COURSE

Coordinated by Roméo Besner, assisted by René Renaud. 3 sessions of 3 hours at 9:00 a.m., on Saturdays: October 14, 21, and 28, 1978. Location to be announced. Fee \$80.

The parts of the plow and adjustment. Instruction and practice in techniques in good plowing. Techniques of field layout, opening, and finishing. Each student will have an opportunity to plow.

COURS DE LABOUR

Coordonné par Roméo Besner, assisté de René Renaud. 3 cours de 3 heures samedi à 9:00 A.M., les 14, 21 et 28 octobre, 1978. Emplacement à être annoncé. Le coût \$80.

Les pièces de la charrue et leur ajustement. Instruction et pratique en techniques de bon labour. Techniques de tracés, l'ados et la finission d'une parcelle. Chaque étudiant aura l'opportunité de faire manoeuvrer la machinerie.

INCOME TAX FOR PART-TIME FARMERS

Eric Purdie. 3 working sessions of 2 hours, Wednesdays at 7:30 p.m., November 22, 29, and December 6, 1978. Farm Centre, Macdonald College. Fee \$30.

Both provincial and federal forms will be completed in detail.

REGISTRATION IS NOW OPEN

THE SOLAR ALTERNATIVES

Michel Lespérance. 10 lectures of 2 hours, Thursdays at 7:30 p.m., beginning September 21 through November 23, 1978. Macdonald College. Fee \$75.

With the soaring cost of energy, we see more home owners and businessmen investigating methods that will conserve or produce energy. In recent years solar energy has become a more and more accepted method for producing heat for domestic and commercial use. The purpose of this course is to describe the basic theory related to thermal use of solar energy.

ENERGY AND CONSERVATION: History of energy, description of conventional sources, reserves, and methods to conserve energy will be evaluated. **ENERGY ALTERNATIVES:** Description of the various sources — wind, biomass, geothermal, tidal, solar. **SOLAR ENERGY:** Solar characteristics (energy, spectra, radiation) will be discussed. Solar data will be evaluated. Types of systems will be defined. **SOLAR COLLECTORS:** Description of various types. Discussion of material and construction. **TRANSPORT SYSTEM:** Type of circuit (open, closed), duct and pipe sizing and pump and fan selection. **CONTROL SYSTEM:** Sensors, controllers and valves. System design will be considered. **STORAGE:** Description and evaluation of the various types. **SOLAR ARCHITECTURE:** Architectural consideration in solar design. **SOLAR SYSTEMS:** Swimming pool, domestic hot water, space heating, solar greenhouse. **SOLAR INSTALLATION VISIT.**

BIO-ORGANIC GARDENING AND FARMING

Prof. Philip R. Warman, Department of Renewable Resources. 10 lectures of 2 hours, Wednesdays at 7 p.m., beginning September 13 through November 15, 1978. Macdonald College. Fee \$75. Class limited to 30.

Purpose: To develop an understanding of the environmentally sound methods of food production through the use of natural fertilizers and natural insect controls. **Topics covered will be:**

1. What is Bio-Organic Gardening and Farming? Why bother?
2. Soil — the nature and properties of soils
3. Soil management for crop production; soil organisms
4. Organic matter — characteristics and maintenance
5. The use of animal manures and composts
6. Using green manures and vegetable residues
7. Harmful and beneficial insects — insects as predators and parasites
8. Naturally occurring insecticides
9. Physical and mechanical pest and weed control — Disease control
10. Insect repellents; Companion planting.

MUSHROOMS — for the beginner

Prof. R. H. Estey, Department of Plant Science. 4 sessions of 2 hours, Wednesdays at 7 p.m., beginning September 13 through October 4, 1978. Macdonald College. Fee \$35.

Field trips involving identification, collection, and preparation of mushrooms for home use.

SMALL-SCALE SWINE PRODUCTION

Prof. T. G. Hartsock, Department of Animal Science. 1 lectures of 2-1/2 hours, Thursdays at 7:30 p.m., beginning September 14 through November 16, 1978. Macdonald College. Fee \$80.

This course is intended for persons with little or no experience with swine but who may be interested in raising small numbers of swine as a side operation or on a hobby-type farm. The course will include a discussion of the various aspects of small-scale swine production as well as farm visits for demonstrations of routine management practices, buildings, equipment, baby pig care, and meat cutting.

BEEES AND BEEKEEPING

Prof. V. R. Vickery, Curator, Lyman Museum. 10 lectures of 2 hours, Mondays at 7 p.m., beginning September 1 through November 20, 1978. Macdonald College. Fee \$75. Class limited to 40. Thanksgiving Monday, College holiday.

Life and behaviour of honeybees. Insect pollination of plants. Practical beekeeping.

Textbook — "Complete Guide to Beekeeping" by R. A. Morse, 1972, Dutton & Co. Available at Macdonald College Bookstore, approx. \$9.50.

AGRICULTURAL PROJECT ANALYSIS (A Professional Development Course)

Peter Appleton, Department of Agricultural Economics. 10 sessions of 3 hours, Wednesdays at 6:30 p.m., beginning September 20 through November 22, 1978. Macdonald College. Fee \$115.

Designed for professional agriculturalists and engineer consulting internationally. This course will train personnel in accepted procedures for Agricultural Project Analysis.

Course content approximates similar courses offered by the World Bank. Concepts discussed will include financial and economic analysis, farm income analysis, partial and complete budgeting, benefits and costs, rural infrastructure, rural credit, and the role of agriculture in rural development projects. Numerous case studies of agricultural projects will be used.

REGISTRATION IS NOW OPEN

FIELD CROP PRODUCTION

Coordinated by Prof. N. C. Lawson, Department of Plant Science. 10 lectures of 2 hours, Thursdays at 8 p.m., beginning September 21 through November 23, 1978. Macdonald College. Fee \$75.

A course for those who are about to buy or have just bought a farm. Topics covered will be the choice of crops, with emphasis on their comparative potential as sources of energy and protein for livestock feeding, as well as the basic considerations in field management of hay and pasture crops, cereals, corn, and seed proteins.

JARDINS ET PARTERRES

Diane L. Benoit. 4 cours de 2 heures, lundi à 7 p.m., commençant le 18 septembre jusqu'au 16 octobre, 1978. Macdonald College. Le coût \$35. Maximum 20 étudiants. Jour de l'Action de Grâce, congé du Collège.

1. Légumes de saison froide
2. Légumes de saison chaude
3. Fleurs annuelles et de parterre
4. Rocailles et fleurs vivaces.

La préparation du sol, la date et l'entretien des semis, la transplantation et la fertilisation, les insectes et maladies à surveiller et la récolte. Les fleurs annuelles et vivaces et leurs temps de floraison, la planification des parterres et des rocailles, le choix des variétés et leurs exigences.

A HOBBY GREENHOUSE — WITH SUCCESS

Ede J. G. Gyapay. 6 lectures of 2 hours, Thursdays at 7:30 p.m., beginning September 21 through October 26, 1978. Macdonald College. Fee \$45.

Construction: location, ventilation, glazing, floor and walks, equipment, heating and cooling systems.

Operation: light, temperature, moisture, soil, fertilizers, plant disorders, insects and diseases, spraying, dusting and fumigation.

WINE AND WINE TASTING

Marcel Allard, Professional Chemist. 10 sessions of 2 hours, Thursdays at 7:30 p.m., beginning September 21 through November 23, 1978. Macdonald College. Fee \$75.

General discussion on the history and the making of wine, as well as grape varieties. Tasting with identification of the various flavours.

Eight lectures of application on wines from the following regions: Bordeaux, Rhone, Alsace, Loire, Bourgogne, Champagne, Canada, and Spain. Comprised of a minimum of three wines per session. A supplementary charge of \$25 will be made to offset the cost of supplies consumed.

REAL ESTATE LAW

Allan A. Mass. 10 lectures of 2 hours, Thursdays at 7 p.m., beginning September 21 through November 23, 1978. Macdonald College. Fee \$75.

A practical course designed to explain basic elements of Quebec real estate law, of interest to both rural and urban property owners. Topics will include:

1. Purchase and sale
2. Leases, rent control, and condominiums
3. Mortgages
4. Servitudes, restrictive covenants and title defects
5. Civil liability and insurance
6. Zoning and environmental controls
7. Taxation
8. Real estate brokers.

Participants will be provided with examples of the various deeds discussed in the course.

375-310A Special Topics in Renewable Resources
(2 credits)

PHOTOGRAMMETRY AND PHOTO-INTERPRETATION

Eric Thompson, Lecturer. 12 sessions of 3 hours, Tuesdays, beginning in September 1978. Date and time to be announced. Macdonald College. Fee \$125.

The use of air photographs in resource management will be examined. Principles of photogrammetry (the science of obtaining reliable measurements from photographs) will be studied. General principles of photo-interpretation will then be discussed. Textbook \$20, Lab fee \$10-\$15.

This course also available for non-credit.

CANVASWORK — Let's take another look at Needlepoint

Marlene Ballantyne. 6 sessions of 2 hours, Wednesdays at 7:30 p.m., beginning September 13 through October 18, 1978. Macdonald College. Fee \$45. Class limited to 15.

A beginner's course, which also offers scope for the experienced needleworker. Experimentation and creativity are encouraged.

Twenty-five needlepoint stitches are taught. The student makes a small Christmas tree ornament during the first week. The major project is the creating of a pillow or wall hanging, incorporating as many of the stitches as the student desires. The following topics are also taught: understanding various kinds of canvases and wools; designing needlepoint by charting and sketching on canvas; blocking and finishing. All materials required (\$15) available at class.

REGISTRATION IS NOW OPEN

PRE-RETIREMENT PLANNING

Coordinated by Dr. Sylvia McDonald, C.N.D., Marianopolis Retirement Centre. 9 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning October 4 through November 29, 1978. Macdonald College. Fee \$70. Minimum of 15 students required to open.

A series of evenings organized to deal with some of the evident problems in preparing for retirement. Couples are encouraged to follow the course together.

INTRODUCTION AND ORIENTATION: Objectives and Goals — Expectations of Participants (Sylvia McDonald, C.N.D.)

RETIREMENT FINANCIAL PLANNING: Pension Plans, Savings, Accumulating Capital, Taxes. (David Hanford, Credit Foncier Trust)

ESTATE PLANNING: Life Insurance, Income, Legal Information. (Douglas Lloyd, Sun Life of Canada)

YOUR QUEBEC PENSION PLAN: (Louis Godin, Public Relations, Quebec Pension Board)

WHERE TO LIVE: (Corinne K. Seigny, Horizon Realities Inc.)

PREVENTATIVE ASPECTS OF SOME PHYSICAL AND EMOTIONAL PROBLEMS IN RETIREMENT: (Dr. R. Matsusaki, Family Medicine, Pointe Claire)

CREATIVITY — LEISURE — EDUCATION: Education — A way of Life at Retirement and Always. (Sylvia McDonald, C.N.D.)

LIVING — RETIREMENT OR CHANGE: Discussion Leaders (T.B.A.)

INTERIORITY — SELF-FULFILMENT IN SOLITUDE (the Reverend John Lyng, Chaplain, Lakeshore General Hospital and the Reverend Bruce Ross, Beaconsfield United Church).

LET'S QUILT IT

Dorothy Rich. 8 sessions of 2 hours, Mondays at 7:30 p.m., beginning September 18 through November 13, 1978. Macdonald College. Fee \$60. Class limited to 20. Thanksgiving Monday, College holiday.

The making of a quilt including instructions on colour, design, pattern-making, setting, quilting process, and finishing processes. Materials extra.

GARDENING FOR ALL SEASONS

Ede J. G. Gyapay. 6 lectures of 2 hours, Mondays at 7:30 p.m., beginning September 18 through October 30, 1978. Macdonald College. Fee \$45. Thanksgiving Monday, College holiday.

The course will include discussion of: Fall preparation of compost; soil preparation, manuring, and fertilizing; pruning, cleaning, spraying; sowing, planting. Winter storage of bulbs, tubers, plants and vegetables; protection of shrubs, fruit trees, and small fruits. Spring pruning, cleaning, and spraying shrubs and fruit trees; soil preparation, manuring, and fertilizing; seedlings to be prepared indoors for later planting in the garden.

NUTRITION — FACTS AND FANCIES

Dr. Margaret R. Kirkcaldy, Nutritionist. 10 lectures of 2 hours, Wednesdays at 7 p.m., beginning September 20 through November 22, 1978. Macdonald College. Fee \$75. Class limited to 15.

A discussion of the basic elements of nutrition of interest to the consumer of today, to provide assistance in coping with the profusion of nutrition information and misinformation in the marketplace. The course will cover nutritional components of food, their role and requirement; regulatory policies governing the addition of nutritional and non-nutritional factors to food, and the related labelling requirements; the concept of health foods, vegetarian diets and special diet foods; factors affecting the development of food habits, food fads and fallacies, and finally, the practical aspects of menu planning and comparative shopping. Attention will be given to questions and problems generated by the group within this context. The course will involve active information search on the part of the participants.

COMPUTERS — COBOL

John Brohan, Macdonald College Computing Centre. 10 lectures of 2 hours, Wednesdays at 7 p.m., beginning September 20 through November 22, 1978. Macdonald College. Fee \$75.

COBOL is the most widely used computer programming language for commercial applications.

The course is designed to teach COBOL and for people who need to know more about computers. During the course the students will write two computer programs and run them on the IBM 370/115 at Macdonald College. No previous computer experience is assumed.

A supplementary charge of \$15 will be made to offset computer costs. Textbook — "Ansi Cobol" by James A. Saxon and William R. England, available at Macdonald College Bookstore, approx. \$10.

ACCOUNTING FOR SMALLER BUSINESS

Celestino Minotti. 10 lectures of 2 hours, Wednesdays at 8 p.m., beginning September 13 through November 15, 1978. Macdonald College. Fee \$75.

The course is designed to introduce the owner of a small business and his/her staff to a basic knowledge of accounting and related matters. The following topics will be discussed:

1. Double-entry bookkeeping
2. Financial statements and how to read them
3. Budgetary control and how to use it
4. Concepts of internal control
5. Accounting systems for the smaller business.

REGISTRATION IS NOW OPEN

HOME REPAIRS AND IMPROVEMENTS

Dr. John B. Gradwell. 10 sessions of 2 hours, Mondays at 7 p.m., beginning September 18 through November 27, 1978. Macdonald College. Fee \$75. Class limited to 20. Thanksgiving Monday, College holiday.

A practical course to enable anyone to make basic additions, and to do repairs and maintenance in the home. The course includes simple plumbing, electrical and heating systems' repairs; finishing a basement room; building or refinishing furniture of wood or plastic; the selection and use of hand and small electrical tools.

AMÉNAGEMENT PAYSAGER

Philippe Fol, Dip. I.T.A.T.S., 10 lectures de 3 heures les mercredis à 7:00 p.m. commençant le 4 octobre jusqu'au 6 décembre 1978. Macdonald College. Coût \$115.

Le cours a pour but principal d'introduire les personnes à l'aménagement paysager de leur propriété. Les sujets suivants seront traités: Aménagement préliminaire, division du terrain, son ossature, aménagement des zones principales, terrassement, murs de soutènement, sentiers, escaliers, patios, terrasses, clôtures et claustras, bassins, pergolas, ruisseaux et préparation d'un plan.

YOGA FOR RELAXATION

Barbara MacKay. 6 sessions of 1-1/2 hours, Wednesdays at 8 p.m., beginning September 20 through October 25, 1978. Macdonald College. Fee \$35.

Relaxation and concentration postures and exercises to improve our physical and emotional well-being are the main aims of this course. Beginner and intermediate students of Yoga are welcome. We will strive for independence allowing each person to continue Yoga on their own by the end of the course.

Please wear loose clothing and allow 2 hours for digestion before the Yoga class.

INTRODUCTORY PHOTOGRAPHY

Michael Lyon. 10 sessions of 2 hours, Tuesdays at 7:30 p.m., beginning September 19 through November 21, 1978. Macdonald College. Fee \$75. Class limited to 12.

This course is designed to familiarize beginners with basic photographic procedures and techniques. The theoretical part will be an in-depth look at cameras, film, and paper with extensive use of overhead transparencies and slides. The practical side will be student use of all facets of darkroom procedure. A 35mm Single-Lens-Reflex camera will be necessary. A supplementary charge of \$15 will be made to cover cost of materials.

A SMOULDERING ISSUE

Maurice Monette, coordinator. 6 sessions of 2 hours, Thursdays at 7:30 p.m., beginning September 21 through October 26, 1978. Macdonald College. Fee \$45.

Burn wood — save energy.

Topics to be covered will be a study of wood stoves, installation, safety, various woods and their quality, costs, etc.

Wood you or wooden you?

STAINED GLASS WORKSHOP

John Lehman. 10 sessions of 3 hours, Wednesdays at 7 p.m., beginning September 13 through November 15, 1978. Macdonald College. Fee \$75. Class limited to 15.

This course will deal with the technique of glass cutting with the aim of producing leaded glass art objects. Projects will be based on individual initiative and should include one candle chimney, one lamp, and one small window. Prerequisites are patience, perseverance, coordination, and interest.

A charge of \$30 will be made to offset the cost of materials required for the objectives stated. Bring your own tools, e.g., soldering iron, hammer, pliers, and glass cutter.

FINANCIAL PLANNING

Dean H. Ladd. 8 sessions of 2 hours, Wednesdays at 7 p.m., beginning October 4 through November 22, 1978. Macdonald College. Fee \$60.

An introductory course in planning the source, requirements, and utilization of cash.

Topics to be covered include the following:

1. Fundamentals of accounting
2. Cash accounting
3. Sources of cash — benefits and disadvantages
4. Budgeting and sales forecasting
5. Cash flow
6. Relationship to specific businesses.

REGISTRATION IS NOW OPEN

375-411B Special Topics in Renewable Resources (3 credits)

RECREATION RESOURCE MANAGEMENT

Eric Thompson, Lecturer. 12 sessions of 3 hours, Tuesdays, beginning in January 1979. Date and time to be announced. Macdonald College. Fee \$125.

Outdoor recreation management principles as related to renewable resources, needs, programs, opportunities, policies and administration in the public and private sectors will be examined.

This course also available for non-credit.

(A) IS FARMING FOR YOU? — How to buy a Farm

Rudi Dallenbach, Director, Macdonald College Farm. 4 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning January 16 through February 6, 1979. Farm Centre, Macdonald College. Fee \$35.

1. What to look for when buying a farm
2. Visit to Macdonald College farm
3. How to organize your farm
4. Taxation for part-time farmers.

(B) IS FARMING FOR YOU? — Soils and Field Crops

Rudi Dallenbach, Director, Macdonald College Farm. 4 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning February 13 through March 6, 1979. Farm Centre, Macdonald College. Fee \$35.

1. How to improve and manage your soils
2. Planning a forage program
3. Cash crop farming
4. How to harvest and store forage crops.

BEEF PRODUCTION IN EASTERN CANADA

Coordinated by Henry Garino, Department of Animal Science. 6 lectures of 2 hours, Mondays at 7:30 p.m., beginning January 15 through February 19, 1979. Farm Centre, Macdonald College. Fee \$45.

1. Introduction; Beef situation; Terminology
2. Barn night; Husbandry; Breeds
3. Breeding; Reproduction; Cow-calf management
4. Disease control; Health
5. Feeds and feeding
6. Feedlot management; Marketing; Budgeting.

HOW TO IMPROVE AND CARE FOR LIVESTOCK

Coordinated by Jim Houston, Asst. Director, Macdonald College Farm. 10 sessions of 2 hours, Thursdays at 7 p.m., beginning January 18 through March 22, 1979. Farm Centre, Macdonald College. Fee \$75.

This course is a **repeat** of the Fall Term.

330-410B COMPARATIVE AGRICULTURE (3 credits)

Coordinated by staff, and guest lecturers. Faculty of Agriculture, Macdonald College. 12 lectures of 2-1/2 hours, beginning week of January 15, 1979. Date and time to be announced. Fee \$115.

Study of contrasts in physical, biological, and social resource bases for agriculture between temperate and tropical regions; organization of agricultural production in developing countries; agriculture in the development process; technology transfer and aid programs for agriculture. Case studies will be used.

This course also available for non-credit.

INTRODUCTION TO AGRICULTURAL MARKETING BOARDS AND THE UNION DES PRODUCTEURS AGRICOLES (UPA)

Serge Deschamps, Director of Production Control, Volbec, U.P.A. 5 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning February 6 through March 6, 1979. Macdonald College. Fee \$40.

The objective of this course is to inform present and future farmers about quotas, services, and organization of marketing boards in Quebec. The course will introduce participants to the short- and long-term policies of marketing boards as they benefit the producer and consequently the consumer. There will be discussion periods on existing marketing boards such as in dairy, poultry, fruits and vegetables, and forestry products. The course will also touch upon the relationship between provincial and national agricultural marketing agencies.

INTRODUCTION DE CONCEPTE DES PLANS CONJOINTS ET LE SYNDICALISME AGRICOLE, UNION DES PRODUCTEURS AGRICOLES, (UPA)

Serge Deschamps, Directeur du Contingement, Volbec, UPA, 5 cours de 2 heures, mardi à 7:30 p.m. commençant le 6 février jusqu'au 6 mars 1979. Macdonald College. Le coût: \$40.

L'objectif de ce cours est de vulgariser et informer les intéressés aux services, structures et quotas des plans conjoints ainsi que leur fonctionnement.

Seront expliqués les buts des plans conjoints à défendre les intérêts des producteurs par les plans conjoints et l'impacte de ces plans conjoints sur les consommateurs.

Seront aussi discutés les plans conjoints déjà en place e.g. lait, volaille, oeufs, fruits et légumes et le bois. Le cours touche également aux relations entre les plans conjoints du Québec et les offices nationaux de commercialisation.

REGISTRATION IS NOW OPEN

CONTROLLING CROP DISEASES, INSECTS, AND WEEDS

Coordinated by Profs. R. H. Estey, R. K. Stewart, and A. K. Watson, Departments of Plant Science and Entomology. 10 lectures of 2 hours, Tuesdays at 8 p.m., beginning January 9 through March 13, 1979. Macdonald College. Fee \$75.

A course for those who have recently acquired farmland. It will cover the practical aspects of field crop disease, insect, and weed control, including discussions of the identification, prevention, and control of common plant diseases, weeds, and insect pests.

FARM BUSINESS MANAGEMENT

Marcel J. Couture, Diploma in Agriculture Program. 10 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning January 24 through March 28, 1979. Macdonald College. Fee \$75.

This course is a **repeat** of the Fall Term.

BUTCHERING

Richard Channon, Department of Animal Science. 5 sessions of 2 hours, Tuesdays at 7 p.m., beginning January 23 through February 20, 1979. Swine Centre, Macdonald College Farm. Fee \$40. Class limited to 15.

This course is a **repeat** of the Fall Term.

INCOME TAX FOR PART-TIME FARMERS

Eric Purdie. 3 working sessions of 2 hours, Wednesdays at 7:30 p.m., March 14, 21 and 28, 1979. Farm Centre, Macdonald College. Fee \$30.

This course is a **repeat** of the Fall Term.

GROW YOUR OWN TREES, SHRUBS, AND FLOWERS

H. A. Kouwenberg and R. J. Watson. 10 sessions of 2 hours, Tuesdays at 7 p.m., beginning January 16 through March 20, 1979. Macdonald College. Fee \$75.

A practical course to introduce the amateur to the principles of plant propagation and the establishment of trees, shrubs, and flowers. The course includes the basic techniques of propagation; woodlot and Christmas tree growing; sugarbush management and equipment; nursery and greenhouse management; exotic plants and flowers; small fruits; the establishment of seeds, seedlings, and cuttings to regenerate plants. Planning for planting, equipment, layout, selection of species, and techniques of pruning, care, and maintenance.

AGRICULTURAL FRENCH VOCABULARY

Prof. Jacqueline Gerols, Department of Renewable Resources. 10 sessions of 2 hours, Thursdays at 7 p.m., beginning January 18 through March 22, 1979. Macdonald College. Fee \$75.

A survey of farm terminology in French for those who already have a basic knowledge of the language but wish to acquire a more technical vocabulary in agriculture.

HORSE MANAGEMENT 1B

Pam Dillingham. 10 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning January 16 through March 20, 1979. Macdonald College. Fee \$75.

This course is a **repeat** of the Fall Term.

THE SOLAR ALTERNATIVES

Michel Lespérance. 10 lectures of 2 hours, Thursdays at 7:30 p.m., beginning January 25 through March 29, 1979. Macdonald College. Fee \$75.

This course is a **repeat** of the Fall Term.

AMÉNAGEMENT PAYSAGER

Philippe Fol, Dip. I.T.A.T.S., 10 lectures de 3 heures les mercredis à 7:00 p.m., commençant le 24 janvier jusqu'au 28 mars 1979. Macdonald College. Coût \$115.

Ce cours est une **répétition** de la session d'automne.

SHEEP FARMING

Coordinated by Henry Garino, Department of Animal Science. 6 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning February 27 through April 3, 1979. Macdonald College. Fee \$45.

A practical course for people interested in sheep as a hobby or as the basis for a larger enterprise.

The course will cover the relative importance of sheep in Quebec. Handling, breeds, health, feeding, and managerial aspects of sheep production will be dealt with in detail.

REGISTRATION IS NOW OPEN

WATER FOR FARM, HOME, AND COTTAGE

Stephen Ami, Department of Agricultural Engineering. 6 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning January 17 through February 21, 1979. Agricultural Engineering Shop, Macdonald College Farm. Fee \$45.

Quality and quantity of water needed for home, cottage and farm; water pumps and pressure distribution systems; treatment to reduce water hardness and remove contaminants; location and construction of wells and ponds; construction and maintenance of septic tanks and disposal fields, and other means of waste water disposal.

STAINED GLASS WORKSHOP

John Lehman. 10 sessions of 3 hours, Wednesdays at 7 p.m., beginning January 17 through March 21, 1979. Macdonald College. Fee \$75. Class limited to 15.

This course is a **repeat** of the Fall Term.

INTRODUCTORY PHOTOGRAPHY

Michael Lyon. 10 sessions of 2 hours, Tuesdays at 7:30 p.m., beginning January 9 through March 13, 1979. Macdonald College. Fee \$75. Class limited to 12.

This course is a **repeat** of the Fall Term.

FINANCIAL PLANNING

Dean H. Ladd. 8 sessions of 2 hours, Wednesdays at 7 p.m., beginning January 24 through March 14, 1979. Macdonald College. Fee \$60.

This course is a **repeat** of the Fall Term.

FARM WELDING

Coordinated by Prof. E. R. Norris and Jim Cooper. 10 sessions of 2 hours, Mondays at 7:30 p.m., beginning January 15 through March 19, 1979. Agricultural Engineering Shop, Macdonald College Farm. Fee \$75. Class limited to 20.

The course is designed for the novice welder who wants to develop sufficient skill in oxyacetylene and electric arc welding to make minor repairs and small fabrications around the farm. Topics to be covered are: Identification of metals; physical properties of metals; equipment for welding; identification, specifications, and selection of welding rods; techniques of arc and flame welding; brazing and silver soldering; use of the cutting torch; safety in welding.

60% of total class time will be devoted to welding practice. A supplementary charge of \$35 will be made to offset the cost of materials consumed.

SEWING FOR BEGINNERS

Claudia Thierry. 10 sessions of 3 hours, Mondays at 7:30 p.m., beginning January 8 through March 12, 1979. Macdonald College. Fee \$85. Course limited to 15.

Sewing projects shall be as flexible as possible in order to accommodate individual capabilities, yet ensure the learning of certain basic techniques.

- Projects: 1. Garment with collar and set-in sleeves
2. Skirt or slacks with zipper and waistband.

ACCOUNTING FOR SMALLER BUSINESS

Celestino Minotti. 10 lectures of 2 hours, Wednesdays at 8 p.m., beginning January 17 through March 21, 1979. Macdonald College. Fee \$75.

This course is a **repeat** of the Fall Term.

OUTDOORS '79

Doug Anakin. 10 lectures of 2 hours, Wednesdays at 7:30 p.m., beginning February 28 through May 2, 1979. Macdonald College. Fee \$75. Class limited to 20.

These lectures and field outings, for the amateur outdoor person, describe basic equipment and essential skills. Objectives are to provide added enjoyment of the natural environment through the mastery of basic techniques in such outdoor activities as hiking, mountaineering, bird-watching, plant identification, orienteering, canoeing, ski-touring, family camping, and safety. An understanding of ecology and conservation practices and an introduction to the basic elements of survival and enjoyment of the outdoors are essential parts of the course. Several outings will be held to emphasize the content of the lectures.

YOGA FOR RELAXATION

Barbara MacKay. 6 sessions of 1-1/2 hours, Wednesdays at 8 p.m., beginning January 10 through February 14, 1979. Macdonald College. Fee \$35.

This course is a **repeat** of the Fall Term.

LET'S QUILT IT

Dorothy Rich. 8 sessions of 2 hours, Mondays at 7:30 p.m., beginning January 15 through March 5, 1979. Macdonald College. Fee \$60. Class limited to 20.

This course is a **repeat** of the Fall Term.

REGISTRATION IS NOW OPEN

(C) IS FARMING FOR YOU? — Livestock on your Farm

Rudi Dallenbach, Director, Macdonald College Farm. 4 lectures of 2 hours, Tuesdays at 7:30 p.m., beginning March 13 through April 3, 1979. Farm Centre, Macdonald College. Fee \$35.

1. Beef and Dairy cattle
2. Sheep and Goats
3. Swine
4. Poultry.

(D) IS FARMING FOR YOU? — How to build and maintain Fences

Rudi Dallenbach, Director, Macdonald College Farm. 2 lectures of 2 hours, Tuesdays at 7:30 p.m., May 1 and 8, 1979. Farm Centre, Macdonald College. Fee \$25.

Field demonstration of fencing for farm animals, covering various types of materials to be used, such as: wire, high-tension, wood posts; steel, and including cost of each. Fee includes cost of materials and equipment used.

BEES AND BEEKEEPING

D. Neil Duffy, Lyman Museum. Length of course 5 weeks, 10 lectures of 2 hours, Mondays and Wednesdays at 7 p.m., beginning April 18 through May 21, 1979. Macdonald College. Fee \$75. Class limited to 40.

This course is a **repeat** of the Fall Term.

ADVANCED BUTCHERING — FOR HOME USE

Richard Channon, Department of Animal Science. 5 sessions of 2-1/2 hours, Tuesdays at 7 p.m., beginning March 27 through April 24, 1979. Swine Centre, Macdonald College Farm. Fee \$45. Class limited to 15.

Beef and Pork — cutting, boning, rolling, and packaging for freezer. Killing and eviscerating of poultry, including ducks and geese.

FARM ANIMAL BEHAVIOUR

Prof. T. G. Hartsock. Department of Animal Science. 5 sessions of 2-1/2 hours, Thursdays at 7:30 p.m., beginning April 12 through May 10, 1979. Farm Centre, Macdonald College. Fee \$45. Course limited to 30.

Course will include films, observations, and discussions of farm animal behaviour and its application to animal production. Fighting behaviour and its relationship to dominance orders and reproduction behaviour and its relationship to estrus detection will be emphasized, due to their importance in animal management.

A HOME VEGETABLE GARDEN

Ede J. G. Gyapay. 6 lectures of 2 hours, Mondays at 7:30 p.m., beginning March 19 through April 30, 1979. Macdonald College. Fee \$45. Easter Monday, College holiday.

1. Planning the garden
2. Soil preparation
3. Seeds, seeding, plants, planting
4. Weed and pest control
5. Particular needs and habits of vegetable crops
6. Spice and medicinal plants.

QUEBEC SPRING WILDFLOWERS

Prof. D. W. Woodland, Department of Plant Science. Length of course 5 weeks, 10 lectures of 2-1/2 hours, Tuesdays and Thursdays at 7 p.m., beginning May 1 through May 31, 1979. Macdonald College. Fee \$80. Class limited to 25.

A field and laboratory course designed for the serious gardener, amateur botanist, and flower lover who has always wondered "what flower is that?"

The course will involve the identification, preservation, family recognition and ecology of spring wildflowers and ferns in southern Quebec. There will be field trips to different ecological areas.

REGISTRATION IS NOW OPEN

MORE POWER TO YOU!

Pat Wiggins, coordinator. 4 sessions of 2 hours, Mondays at 7:30 p.m., beginning March 12 through April 2, 1979. Macdonald College. Fee \$35.

Application of two-cycle engines, e.g., chain saws, power mowers, and utility equipment.

ADVANCED BIO-ORGANIC GARDENING

Prof. Philip R. Warman, Department of Renewable Resources. 8 sessions of 2 hours, Wednesdays at 7 p.m., beginning May 16 through July 4, 1979. Macdonald College. Fee \$60. Class limited to 30.

To acquaint the more advanced gardener or farmer with the practical problems which are encountered during the growing season. This course is designed for the person who has some prior knowledge of bio-organic gardening or farming.

Instruction time will be split between classroom discussion and field demonstration work on a fruit and vegetable farm.

Topics:

- Recognizing harmful and beneficial insects in the garden
- Soil sampling and testing
- The use of nutrient additives (animal manures, composts, fertilizers, green manures, soil inoculants, etc.)
- Plant deficiency symptoms and plant diseases.
- Land preparation.

ESTABLISHING AND OPERATING A SMALL APPLE ORCHARD

Richard Saul. Length of course 5 weeks, 10 lectures of 2 hours, Mondays and Tuesdays at 7:30 p.m., beginning April 2 through May 7, 1979. Macdonald College. Fee \$75. Easter Monday, College holiday.

This course is a **repeat** of the Fall Term.

CANVASWORK — Let's take another look at Needlepoint

Marlene Ballantyne. 6 sessions of 2 hours, Wednesdays at 7:30 p.m., beginning April 4 through May 9, 1979. Macdonald College. Fee \$45. Class limited to 15.

This course is a **repeat** of the Fall Term.

MONTREAL BIRDS

Coordinated by Bob Carswell and Peter Mitchell, members of the Province of Quebec Society for the Protection of Birds. 10 sessions of 2 hours, Tuesdays at 7 p.m., beginning March 20 through May 22, 1979. Macdonald College. Fee \$75. Class limited to 25.

Discussions and field trips devoted to identifying spring birds by sight and by sound (and outings to test your skill in this area); seminars on where to look for the various species in the Montreal area, and how to best attract and feed birds and manage your property for this purpose; discussions on migration (including anticipated spring arrival dates); nesting, territoriality, endangered species, conservation, and other topics.

Binoculars needed for field trips (7 x 35 excellent). A good field guide (either Peterson, "A Field Guide to the Birds" or Robbins, Brunn & Zim, "Birds of North America").

GOAT HUSBANDRY

Martine Gadbois. 9 sessions of 2 hours, Wednesdays at 7:30 p.m., beginning April 25 through June 20, 1979. Farm Centre, Macdonald College Farm. Fee \$70.

This course is a **repeat** of the Fall Term, given in English.

EDIBLE WILD PLANTS

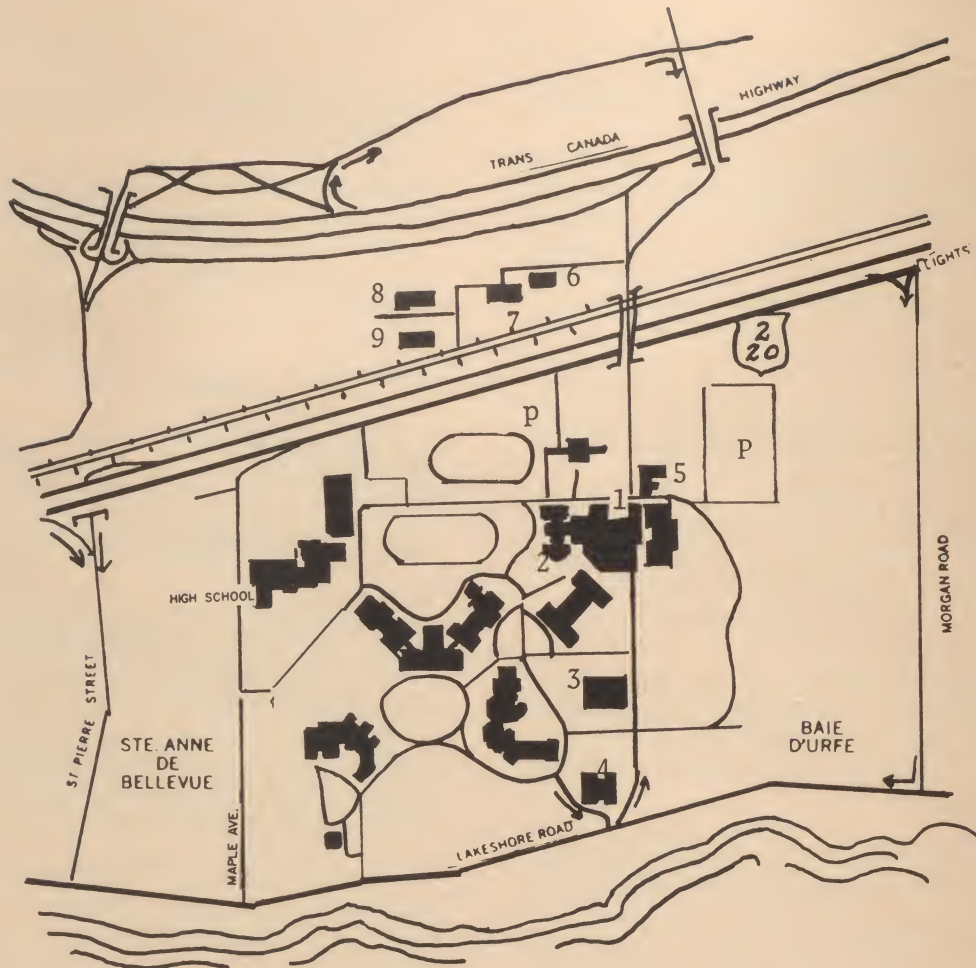
Wendy Dathan. 6 lectures of 3 hours, Wednesdays at 7 p.m. beginning May 9 through June 13, 1979. Macdonald College. Fee \$70. Class limited to 30.

How to recognize, where to find, and how to use our local edible wild plants.

Textbook — "Edible Wild Plants" by Bradford Angier, available at Macdonald College Bookstore, approx. \$5.

REGISTRATION IS NOW OPEN

MACDONALD COLLEGE



LEGEND

1. Macdonald-Stewart Building
2. Raymond Building
3. Centennial Centre
4. Power House

5. Parasitology
6. Agr. Eng. Shop
7. Farm Centre
8. Swine Building
9. Large Animal Research/Teaching

EVENING COURSES
Extension Department
Box 237
Macdonald College, P.Q. H0A 1C0
Telephone: 457-2000, loc. 227, 284

I wish to register for course in

Mr.
Mrs.
Ms.

Address Tel. No.

..... Postal Code

Employer Tel. No.

Address

Fee paid by Cheque Money Order Cash

PLEASE MAKE CHEQUES PAYABLE TO MACDONALD COLLEGE

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Extension Department
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the course time will be spent in the various barns at the Farm. Jim feels that it is important that people taking the course become as familiar as possible with the animals and associated tools and procedures early in the course. He says that the actual classroom lectures can only be a supplement to the real heart of the course: how to work with and care for animals.

Jim also says that it's not necessary, or even advisable for the hobby farmer to make heavy investments in livestock right at the outset. He thinks that most people should start off in a small way, to minimize the financial risks, and to find out if the work involved is as attractive a reality as it was a prospect. He mentions that part of the course deals with how to select livestock: what to look for when buying, how to choose healthy animals, and so on. Proper decisions at this time can make the difference between success and failure of the entire venture.

Again, people taking the "How to Improve and Care For Livestock" course will not be professional farmers after they've finished it. However, they will have some idea of what's involved in buying and raising animals for their personal use and satisfaction.

QUEBEC FARMERS' ASSOCIATION ON THE MOVE

The last year has not seen many changes occurring in the Quebec Farmers' Association; the many new activities that have sprung up are the result of existing policies and programs.

Projects that were initiated two to three years ago have now started to bear fruit, well justifying the sweat and labour that have gone into their development. The QFA now boasts over 700 members, up from about 400 the year before. Many of these new members also belong to the QFA local branches in rural Quebec, participating in the many activities there.

Tying these local branches together at the regional level are the QFA fieldmen, who have been a busy lot during the last 18 months. They are the persons who work directly with local members and their branches, assisting with the development of new and existing programs, and acting as a link between the local and provincial levels. The QFA Directors agree that the large increase in membership has largely been due to their efforts in the field.

Associated with this increase in membership has been a corresponding increase in the number of activities undertaken by the Association. This has happened at both local and provincial levels. The activities and projects at the local level over the last year are numerous and ambitious. These have ranged from corn-growing contests in the Chateauguay Valley to information seminars in the Eastern Townships to tax seminars in Shawville — and these are only a few.

For example, the tax seminars held last spring proved to be very successful. These focused on the problems faced by farmers when filing their income tax, plus the financial aspects of estate management. Included in the latter were discussions on why or why not to incorporate the family farm and how to pass the farm down to the next generation

with a minimum of bureaucratic bother. Over 150 farmers participated in four of these seminars, held in Ormstown, Shawville, Cowansville, and Ayer's Cliff.

To go on: the Open Farm Day organized by the Richmond QFA branch has proven to be a popular attraction for QFA members and visitors. Inclement weather on each of the three occasions the event has been held has not deterred the crowds from growing larger each year. This year was no exception as an estimated 2,000 visitors turned up at the extensive and impressive farm of Bob and Lois Laberge near Danville on June 18. The visitors saw demonstrations of old and new farm machinery, a blacksmith shop in operation, tried their hands at making home-made ice cream, and generally enjoyed themselves seeing the many other attractions of the day while visiting with friends and neighbours.

At the Provincial level, QFA president Doug Johnston and Eastern Townships fieldman Warren Grapes recently returned from a trip to the Gaspé peninsula where they visited farmers and farm groups. The reason behind the trip was to explore the possibility of extending QFA activities to that region. The QFA already has a number of members in the region, and the Board of Directors are anxious to work with the Gaspé farmers so that they might share the benefits enjoyed by QFA members in other parts of the province.

The QFA is now into its slow season, as far as activities are concerned. This is understandable when one considers that the majority of its members are farmers who have hay to get in and grain and corn crops to

(Continued on Page 16.)

Why Doesn't Breast-Feeding Work?

by M. E. Thomson*

Human milk evolved for babies, cow's milk evolved for calves, and infant formula is man's fairly knowledgeable attempt to adapt the second to resemble the first. As we learn more about the complex composition of human milk and of the value of its special properties for infants, we further modify the formulas we feed our young. But why don't we utilize the ideal human infant food?

A Little Knowledge

Nature's way of feeding babies is not necessarily perfect. For example, all newborns benefit from a single dose of vitamin K, but recent research has revealed that nature is wiser than we know. As simple chemical analyses showed human milk to be deficient in both vitamin D and iron, supplements of both these nutrients were recommended for breast-fed babies. Vitamin D is a fat soluble vitamin so it seemed correct to separate the milk fat from the whey when analyzing for vitamin D. However, it has now been found that 90 per cent of human milk vitamin D is concentrated in the whey and that was previously being thrown away before the analysis was begun. The vitamin D in the whey is in a sulphated form which makes it water soluble.

The iron story is a different one, but also interesting. The iron content of both human and cow's milk is truly low, yet breast-fed babies seldom show signs of

anemia, even at nine months. The explanation for this mystery has recently been found. It lies in the ability of human babies to absorb much of the iron from human milk, while most of the iron in cow's milk or enriched infant formula passes right through. Therefore, breast-fed babies do not need a supplementary source of iron for at least six months. These two examples illustrate how little we know about even the simplest facets of infant nutrition.

Official Recommendations

The Nutrition Committee of the Canadian Pediatric Society

"If it be found that a considerable proportion of women are gestating and bearing children but are cutting short this reproductive cycle by failing to lactate, it is surely both a matter of biological or clinical importance and a social experiment of great scientific interest." Spence, Brit. Med. J. 2:729, 1938.

"strongly recommends breast-feeding for all full term newborns except in the few instances where specific contraindications are present." Similar organizations in the United States, the United Kingdom, and other countries have made similar statements. In Quebec, the government policy is to double the percentage of breast-fed babies in the next few years.

What Happens In Practice

Many young women today are following these recommendations and trying to breast-feed their infants, but the process does not seem to work for many and they give it up in the first few weeks. A high early failure rate in breast-feeding has been reported in many developed countries. A survey we conducted in the summer of 1977 of mothers who breast-fed their newborn babies in a Montreal hospital showed that 65 per cent of the mothers of first babies had given up breast-feeding by two months after delivery. Until this century the survival of every mammalian species had been dependent on the mother's suckling of the young, and yet modern women have trouble maintaining even a two-month lactation. Why do women give it up so soon?

An Attempt at an Answer

One of the common answers to this question is that modern woman has many interests outside the home and does not want to be "tied down" to her baby. Yet other primate mothers and human mothers in most traditional societies have instinctively tied themselves very closely to their infants. The baby is carried by the mother wherever she goes and nursed whenever he whimpers. Why is the 20th Century modern woman different from her primate cousins and from most of the ages of women who have gone before?

The separation of mother and baby at birth, which occurs in modern hospitals, may affect the normal development of motherly attachment. In order to prevent infection

*Mrs. Thomson is a graduate student at Macdonald College working under the direction of Dr. Thomas G. Hartsock.



and to keep a close watch on an infant during the critical first few hours of life, the newborn is whisked off to a nursery as soon as possible after birth. The realization that this practice might have detrimental side-effects has come from the work of Klaus and Kennel in Cleveland. They found that mothers who were given their nude babies for one hour after birth and for five extra hours each afternoon of the three days following delivery, more often picked up their crying babies at one month after delivery and less often left their babies with someone else. These women were found to be more attentive and responsive to their children one and two years later. Anyone with a knowledge of animal behaviour might expect the separation of mother and baby at birth to adversely affect maternal behaviour. Early separation in monkeys, dogs, rats, and sheep debilitates maternal behaviour; in

goats a 15-45 minute separation leads to complete maternal rejection.

A Test of the Hypothesis

Of all the factors that might cause failure in breast-feeding we felt that separation of mother and baby at birth might be most important. Accordingly, a study was undertaken where 15 women who wanted to breast-feed their firstborns were randomly chosen to hold and feed their babies for 15-20 minutes in the delivery room. The babies were placed, undressed, in their mothers' arms and both were covered with a blanket. It was surprising how readily the babies nursed at 15 minutes of age. After this the babies went to the nursery and the women went to the recovery room and then to the maternity floor. There, none of the nurses

knew which women had been given this special treatment, nor did the interviewer know. These women were compared to 15 other women, randomly chosen, who also planned to breast-feed their firstborns and who gave birth in the same period. This control group followed the usual hospital routine of briefly holding (for less than five minutes) their wrapped infants in the delivery room and breast-feeding for the first time 12 to 24 hours later. At two months after delivery 60 per cent of the special treatment group but only 20 per cent of the control group were breast-feeding, a significant difference.

The rapidity with which newborn babies suckle and the obvious happiness and satisfaction of the mothers who hold and breast-feed their newborn babies make us believe that it is important for mothers and babies to be together at this time. We know that early contact will not solve all the problems involved with breast-feeding, but the results of our study and of others indicate that it does increase the probability of breast-feeding success, especially in first-time mothers.

The Family Farm



Published in the interests of the farmers of the province by the Quebec Department of Agriculture.



SERVICE BROUGHT CLOSER TO FARMERS

A Highly Successful Operation: Decentralization of the Agricultural Hydraulics Service

Since May 1, 175 engineers, technicians, and draftsmen from the Rural Engineering Service of the Quebec Department of Agriculture, Agricultural Hydraulics Division, have established operations in their new work locations: the 84 agricultural information offices distributed throughout Quebec.

Previously, these individuals, responsible for the application and control of some of the Department's more important assistance policies, had been working out of six district Agricultural Hydraulics offices. Situated in Montreal (57), Quebec (38), Alma (21), Rimouski (93), Drummondville (50), and Macamic (6) in the Abitibi region, these offices have since been closed and turned over to the Department of Public Works which will see to finding a new use for them.

Thus, in just a few weeks and in time for the new farm season, was completed the most important administrative decentralization operation to occur at the Quebec Department of Agriculture since the creation of the 12 regional laboratories and offices 10 years ago.

Jean Garon, the Quebec Minister of Agriculture, has welcomed the success of this operation, which will help to improve and accelerate the services provided to farmers under the Land Drainage and Improvement, Farm Ponds, Artificial Lakes and Artesian Wells program, with regard to mechanized works, subdrainage, construction of municipal watercourses, etc. These various measures, alone, represent nearly 20 per cent of the total budget of

the Department of Agriculture, with credits of \$47.5 million for 1978-79, mainly in the form of subsidies to farmers.

A More Rapid and Personalized Service

In the past, requests from farmers concerning mechanized works and subdrainage, as well as those from municipalities concerning the digging of watercourses under their jurisdiction, were channelled through local agricultural information offices and then directed, by way of Quebec, to one of the district Agricultural Hydraulics offices which would approve the projects, oversee the work, and carry out the final inspection. This concentration of personnel in six district offices resulted in depersonalized services, which never allowed the farmer direct contact with the person responsible for his file.

Moreover, at the inspection level, this concentration led to excessive travelling expenses. On the average, inspectors linked to district offices spent about 28 per cent of their time in transit, having to travel up to 400 miles to carry out a single inspection.

The fact that the decision centre for these different measures has thus been brought closer to the farmer and that, since last year, he has been able to choose his own mechanized works contractor and drainage firm, will result in a marked reduction in start-up delays. Farmers will also have a guarantee that their mechanized or subdrainage works will be inspected as

soon as they are completed, thereby permitting them to put their soil back into production without a loss of time, and that they will receive their rightful subsidy payment 30 days after inspection. In the case of subdrainage, the aid from the Department of Agriculture to the farmer is \$0.21-1/2 for each foot of drain; whereas, in the case of mechanized works, the aid covers 50 per cent of the actual cost of allowable work.

Before 1977, farmers had to wait two or three years between their application for subdrainage and the carrying out of the work. The free choice adopted last year had already reduced the average delay to nine months, and this could be further shortened this year.

The Most Important Place: the Agricultural Information Office

The Agricultural Information Office is the closest and most natural service outlet for the farmer. It is a place where he knows everyone and is well-known. From now on it is here that he will come not only to file applications related to the Land Drainage and Improvement, Farm Ponds, Artificial Lakes, and Artesian Wells program, but also to obtain the right answers. Whereas in the past there was no provision for keeping the farmer informed of the development of his mechanized works or subdrainage file, he can now easily be in contact with the persons handling his file.

According to Mr. Garon, the Agricultural Information Offices are, as never before, the most important aspect of the Department of Agriculture, since it is truly there that the quality of services offered to farmers is determined — and this after all, is the Department's principal "raison d'être".

BLACKLEG VACCINATION PROGRAM FOR YOUNG CATTLE

To prevent young cattle from contracting blackleg, the Veterinary Service of Agriculture Quebec are continuing their vaccination program again this year. In addition to preventing blackleg, an almost incurable disease once contracted, the vaccination will prevent the harmful contamination of our farmland by infected carcasses.

Only cattle which have never been vaccinated against blackleg and are between three and 30 months old can receive the vaccine. The vaccination will be subsidized solely in those municipalities where there have been numerous cases of blackleg recorded since 1975. It should be noted that this diagnosis does not have to be reconfirmed by an animal pathology laboratory.

Aware of the importance of such a program to the health of our cattle, the Quebec Department of Agriculture is urging producers to have their cattle vaccinated throughout the year. In addition to supplying the vaccine, the Department undertakes to defray 50 cents per vaccine, i.e. two-thirds of the cost paid by the veterinarian; the farmer, for his part, pays only 25 cents per vaccine.

Procedure

Any farmer who wishes to have his cattle vaccinated against blackleg must contact a Department veterinarian in his area. He should also inform the veterinarian of the number of cattle he wants to have vaccinated, a few days in advance, if possible.

Symptoms

Blackleg is an infectious disease caused by soil bacteria, infecting cattle which are out to pasture in spring and particularly in the fall. An animal stricken with blackleg limps, and there is often swelling in the upper part of the affected limb. At first, the swelling is hot and painful, but it quickly becomes cold and insensible. The skin changes colour and becomes dry and shrivelled. The animal seems depressed, refuses to eat, and has a fever.

In addition to the limbs, blackleg can attack any of the other parts of

the body. The animal affected will generally die peacefully within 12 to 36 hours.

Death of Cattle

Should an animal die of blackleg, specialists at the Quebec Department of Agriculture recommend that farmers neither skin nor leave the carcass lying in the field. Rather, they suggest that it be burned or buried deeply covered with quicklime. These measures will allow a more hygienic burial and will prevent contamination of the soil by infected carcasses.

SOQUIA CAPITAL STOCK RAISED TO \$40 MILLION

In raising its capital stock from \$10 million to \$40 million, Bill 7 amending the Act incorporating "la Société québécoise d'initiative agro-alimentaire", aims principally to increase SOQUIA's power of intervention in order to stimulate Quebec's agro-food economy.

This new capital will be invested in SOQUIA in the following manner: \$9 million in regular capital stock paid at the rate of \$3 million for each of the fiscal years 1978-79, 1979-80, 1980-81; \$21 million in special capital to be used on the recommendation of the Government and according to SOQUIA's needs.

A Real Need

Created in 1975, "la Société québécoise d'initiative agro-alimentaires" did not really begin to

play its role until May 1977, when Agriculture Minister Jean Garon introduced a policy paper in the National Assembly defining SOQUIA's direction and its field of intervention in the agro-food sector.

It is in this manner that SOQUIA is seen entrusted with a mandate to create new outlets for Quebec farm products through initiatives at the processing and distribution levels. Moreover, SOQUIA must encourage the maintenance of diverse links in this vital industry under the control of Quebecers.

SOQUIA must give priority to this double mandate by entering into partnership with private enterprises already in existence or in the process of formation, and by limiting its holdings to less than 50 per cent of the capital stocks.

In certain circumstances, it can act as initiator and as sole share-holder of a project when a private enterprise is not prepared to carry it out.

Equipped with such a mandate and supported by the political will of the government to make the agro-food sector a priority in economic development, SOQUIA has since last year multiplied its interventions, thus exhausting its operating margin. This is concrete proof that SOQUIA responds to a real need of the Quebec economy.

An Impressive Record

The interventions carried out to date by SOQUIA have enabled it to become involved in the main sectors of the agro-food economy. It has been equally active at the input level, such as veterinarian medication and livestock feed, and at the finished products level, such as canned fruit and pastries.

Numbering six, these interventions have resulted in SOQUIA granting loans to agro-food enterprises and buying shares totalling \$12,718,372. SOQUIA interventions during the past 12 months are summarized below.

1. Acquisition of the Veterinary Medicaments Distribution Centre Inc. A \$1,132,500 transaction has enabled this distribution centre to better serve its purpose. Previously, under the direct management of the Department of Agriculture, its experienced considerable administrative restriction.
2. Association with "Salaison Olympia Inc." SOQUIA's involvement in the form of a loan and acquisition of 17 per cent of Salaison Olympia's common shares, has made it possible for

\$350,000 to be injected into the company so that a large expansion project can be carried out.

3. Association with Nutribec Inc. This Quebec flour mill has been able to increase its activities due to SOQUIA's loan and acquisition of 22 per cent of the common shares, for a total intervention of \$600,000.
4. Association with Leahy and Son Inc. SOQUIA's loan and purchase of 40 per cent of shares, totalling \$280,000 have enabled this company specializing in apple juice and canned apple products to continue operations, thus ensuring Quebec apple growers of a continued large market for their product.
5. Participation in the Corneville Cheese Factory Project. SOQUIA is involved in this new venture, a subsidiary of "Produits Alimentaires Anco", so that a new factory specializing in the processing of specialty cheeses can be built. As a result, imported cheeses will be replaced by domestic products made from Quebec milk. SOQUIA's intervention, including the buying of 30.8 per cent of the common shares, amounts to \$400,000.
6. Participation in Culinar Inc. By granting a loan to Culinar Inc and purchasing 38.6 per cent of its common shares (a total intervention of \$11 million) SOQUIA's contribution has enabled Culinar Inc., one of the largest agro-food industries specializing in the manufacturing and distribution of pastries, jams, jellies, etc., to remain under Quebec control.

(Continued from Page 11.)

harvest later in the season. Activities will pick up later in the year with the Provincial Annual Meeting and the resumption of local branch meetings.

The QFA is a pretty solid organization at this time. However, with the great increase in interest in it and its activities goes a corresponding responsibility. The QFA must justify the confidence shown in it by the people who have joined. It must continue to offer worth while and interesting programs. It must be responsive to the expressed desires and needs of its members, so that its program can be expanded or otherwise changed, as necessary. It must not lose touch with the local branch member who is the real root of the organization.

On the other hand, it is up to the individual QFA member to make his or her demands known to the QFA leaders, through the regional fieldmen, the Directors, or directly to the Provincial Office. It is only with constant and close communication between all levels that the QFA will continue to be a strong organization. It has been a long struggle to reach the position at which the QFA is now; only by working together will we stay at this level.

Dear Diary,

I must write to you this evening. Our annual provincial convention is over and again it was a very successful one. The executive met on Monday, May 29. Mrs. Cascadden, Treasurer, was able to be present for the day, along with Mrs. Ina Kilgour, President, Mrs. Gwen Parker, 1st Vice, and Mrs. Daisy Henderson, 2nd Vice. Our new secretary is Mrs. Sheila Washer of West Island Branch. Mrs. Washer, mother of four, is very active in community work, helping with Girl Guides and C.G.I.T.

Mrs. Kilgour welcomed us to the Board Meeting on Tuesday. The theme of the convention was the family ties the community ties the country. It was well chosen. All branches answered the roll call except Magdalen Islands and Bonaventure County. Just as parents wait for the distant members of the family to arrive, so did the Executive wait for our members from far away branches, and they didn't disappoint us.

Wednesday was the first day of convention. It was a warm day, but we met in the air-conditioned Centennial Centre Lounge — a most suitable building. It was just like a family home-coming. First, there were only a few members but by Wednesday noon there were many of us. Friends greeted each other and noted the changes that had taken place in the past year; some were happy, some were sad. Just as each member of a family differs, and we wouldn't want it any other way, so each branch in our Institute family is different. Each branch or county has something of its very own that is so appealing. What passes through



The QWI Executive enjoy a break between meetings. From left to right: Mrs. Daisy Henderson, 2nd Vice, Mrs. Ina Kilgour, President, Mrs. Gwen Parker, 1st Vice, and Mrs. Doris Cascadden, Treasurer. Miss Edna Smith, Past President, was unable to attend Convention.



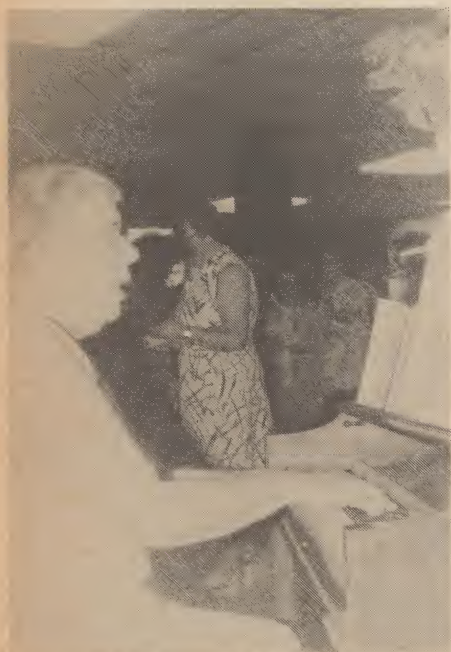
A pleasant break from the intense heat — members appreciated the cool breezes at the lakefront home of Vice-Principal and Mrs. Lloyd.

your mind when you say Missisquoi, Matagami, Gaspé, or Mégantic? I could mention each county and each has its special significance.

Family ties are strong, and Institute ladies know this as well as anyone. One gracious lady excused herself as she left the table at the evening



Photographed following Wednesday morning Open Convention, left to right: Mrs. Sheila Washer, Provincial Secretary, Mrs. Ethel McGibbon, a QWI Past President, Mrs. Lucie Lussier of L'AFEAS, Mrs. Daisy Henderson, 2nd Vice, Mrs. Martha Beilish, President of FWIC, Mrs. Ina Kilgour, President, Mrs. Gwen Parker, 1st Vice, Mrs. Bernard of le Cercle des Fermières, and Mrs. Anne Robertson, Area Vice President to FWIC for Quebec.



Miss Hilda Graham, who wears many hats at Convention — Gatineau County President, Provincial Education Convener, and Person in Charge of Entertainment, is shown here at the piano while members, below, join in the singing.



Mrs. Lucy French, Provincial Citizenship Convener, takes her job of collecting Pennies for Friendship seriously — with a large bag and a big smile!



meal and said, "I must call my husband to tell him I arrived safely." She had come part way by plane.

I wonder what we would do without Hilda Graham! She seems to be able to rise to any occasion. She played the piano, put us through exercises and told stories. At one point



Members, top and below, enjoy a break from business, a chance to get acquainted, and to compare notes. Centre: Mrs. Liz Murphy, Handicrafts Judge, Mrs. Ruby Knights, Provincial Home Economics Convener, and Mr. P. Uher of J. & P. Coats admiring the handicrafts display.

in the program, Hilda asked if she could speak. There was dead silence for a few seconds and she said, "I suppose you are all thinking — now what is she going to say next?" To tell the truth, I was. Anyway, we need you, Hilda.

Dr. L. E. Lloyd, Vice-Principal of the College welcomed us and his words were so appropriate. He said our WI Family and the Macdonald Family both had contributed much to the welfare of our community and that both families will be together for a long time. That is a reassuring remark!

Mrs. J. Bielish, Warspite, Alberta, and President of FWIC, was our guest speaker. She was delightful, and started by telling us she was glad of the shower that had come in the night. It hadn't rained — it had been the garden hose outside her bedroom window! Some of the things she said stayed in my mind. We must try to cooperate with other groups in the community. Le Cercle des Fermières has status with the A.C.W.W. There are 81/2 million women in this latter group, and when there is a similarity of purpose there is a way, even if the language is different. Language is not a barrier; smiles help and hands can be very expressive. Also, in Institute work we develop unconsciously. More help must be given to a family at the time of stress — if this were done, more families would stay together. Mrs. Bielish took us on a quick trip across Canada on her WI travels and told us some interesting facts. Newfoundland is the fastest growing WI in the country; New



Brunswick is the only province that operates in both English and French; Ontario has one-half the membership of FWIC — the biggest in Canada; in the North West Territories, the native women have developed and now feel free to discuss their own problems.

I haven't told you that Madame Lucie Lussier from L'AFEAS and Madame Bernard from Le Cercle des Fermières were our guests also. Both ladies are bilingual and brought greetings from their respective organizations and told us they wished to co-operate with us for a good family life in a united Canada. I was impressed by these ladies, different in some respect, one might say, but with the same aims. "In the big things of life we are one." When Mrs. Bielish made her closing remarks she said that inviting these two ladies to our provincial convention is an historic event. By the way,



our Executive is being invited to their annual conventions.

Mrs. Bielish also told us that the Macdonald Journal is the best "Institute publication" put out in Canada. We are proud of Hazel Clarke and her capabilities in this field.

The guest speaker for the afternoon was Dr. Lloyd from the College whose address on the different family structures and how they applied to the College and to our Organization was interesting and timely.

I talked with Mrs. Muriel Coupland Granby Hill, who said, "I come on my own. I come every year. I have been a member for 41 years and have missed only five meetings. I went to the P.E.I. convention and hope to go to Saskatoon. I got my start in WI work through my mother. What do I like most? People, the friends I meet are the biggest drawing card.

The convener's reports showed that the past year had been interesting and profitable. Due to unavoidable circumstances, Mrs. A. Asbil, Agriculture Convener, went home and her excellent report was read by our Secretary, Lucy French, Citizenship, who has a keen interest in CanSave, outlined what had been done under her convenership. Hilda Graham, as Education Convener, read her report and Mrs. G. Knights, Home Economics Convener, told us what had been accomplished in her area. I must tell you now that Mrs. Knights and Mrs. Lewis prepared The Quebec Women's Institute Cook Book, which was on sale in the handicraft room.

We must not forget our report from our Welfare and Health Convener, Mrs. R. Comba, who took this work over when Mrs. Hendricks left Matagami. Mrs. Comba said to me, "I didn't know just how to do my report. Here I was away up north

and I had to get something ready." She need not have worried for she had a very good report. She told me that she had the chance to visit the L.G. 2 site at James bay and promised to tell us more about this at a later date.

Among the ladies who were 80 years old or more were Mrs. Connelly, Pontiac, Mrs. Cox, Inverness, and Mrs. Haines, Cowansville.

The room where the handicrafts were displayed was very popular. When the judging, under Mrs. Liz Murphy, was completed, there was a lot of interest shown in the results. The display was excellent, but, of course, the Executive and our Home Economics Convener are always wanting more entries. I know some of our members lead busy lives, especially the younger women with children still at home. The representative from J&P Coats also urged more members to take part and said the prize money would be increased for next year.

Well, dear Diary, it wasn't all work and meetings. On Tuesday afternoon the Board was invited to the home of Dr. Lloyd, Vice-Principal, for tea and refreshments. It was a pleasant interlude in what had been a busy session — and a warm one. Our hostess, Mrs. Lloyd and the Faculty wives made us feel very much at home, so the hour we spent in those pleasant surroundings passed very quickly. Also, on two evenings, the members from the West Island Branch invited us for tea, sandwiches, and squares. This was appreciated as some of us were hungry again.

Wednesday night, late, peals of laughter floated down from the lobby on the second floor — I think Annie Lyons was telling stories.

On Wednesday evening, members from Argenteuil put on a short pro-

gram of humorous skits. Judging from the laughter, they were really enjoyed. Anne Robertson showed slides taken on her trip to Kenya. Her commentary was clear and comprehensive, and Anne deserves thanks for her work in connection with this trip as our delegate.

The convention is over! On the way to get my suitcase, I was talking with Mrs. Steve Robinson who said, "We are lucky to be able to meet in such a central place. It has been a very well-run convention, no wasted time, and the Executive is so congenial." Both Mrs. Ashman and Mrs. Patrick Jones echoed those sentiments. This afternoon, during the meeting, I glanced at our Executive and thought how well these ladies uphold the creed. One line in it that I need to keep in mind is, "Grant that we may realize it is the little things that create differences." If we understand this, sometimes greater problems are averted.

In leaving, Mrs. Bielish said that she had a mental picture of the Executive in our new office, that she really understood now what is meant by the Macdonald Family, that we must remember that each one of us is the most important person in the Organization, and that she was taking with her some part of Quebec. I think she left a part of herself with us.

When Mrs. Kilgour said goodbye she asked us to work for Home and Country and for Family. The family ties the community ties the country. Family, what a nice, comfortable, safe word. We all need the protective arm that a family seems to throw around us.

Well, dear Diary, there is so much more I could tell you but it has been a long, busy day.

Gladys C. Nugent,
Publicity Convener QWI



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